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**BUDGETARY IMPLICATIONS
OF H.R. 1245, THE ONE
DOLLAR COIN ACT OF
1991**

404-30

HEARING
BEFORE THE
**TASK FORCE ON ECONOMIC POLICY,
PROJECTIONS, AND REVENUES**
OF THE
**COMMITTEE ON THE BUDGET
HOUSE OF REPRESENTATIVES**
ONE HUNDRED SECOND CONGRESS
SECOND SESSION

HEARING HELD IN WASHINGTON, DC, MAY 28, 1992

Serial No. 6-2

Printed for the use of the Committee on the Budget



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1992

55-924

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402
ISBN 0-16-038742-6



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BUDGETARY IMPLICATIONS OF H.R. 1245, THE ONE DOLLAR COIN ACT OF 1991

THURSDAY, MAY 28, 1992

**HOUSE OF REPRESENTATIVES,
TASK FORCE ON ECONOMIC POLICY,
PROJECTIONS, AND REVENUES
COMMITTEE ON THE BUDGET,
*Washington, DC.***

The task force met, pursuant to call, at 10:02 a.m., Room 2257, Rayburn House Office Building, Hon. Dale E. Kildee, Chairman of the task force, presiding.

Members present: Representatives Kildee, Pease, and Houghton.
Also present: Representative Kolbe.

Chairman KILDEE. The hearing will come to order. I am 2 minutes late, I am usually never late; that is the school teacher in me. But we have a markup downstairs on OSHA, so I ran up from that markup.

This morning's hearing of the House Budget Committee Task Force on Economic Policy, Projections, and Revenue, is on the budgetary impacts of H.R. 1245, the One Dollar Coin Act of 1991. This bill would authorize a new gold colored \$1 coin to be minted and to phase out the \$1 bill.

The House Banking Subcommittee on Consumer Affairs and Coinage, which has legislative jurisdiction over this bill, has held hearings on the issue and plans additional hearings this year. The purpose of today's hearing is to examine the budgetary savings to the Federal Government as a result of changing from a \$1 bill to a \$1 coin.

In May 1990, the General Accounting Office estimated the annual savings to the Federal Government would average \$318 million over a 30-year period. A private study done last year puts the savings at over \$862 million. So as Everett Dirksen would say, pretty soon you'll have real money here.

We are fortunate today to have as a witness the sponsor of H.R. 1245, Representative Jim Kolbe. Every time he sees me, he talks to me about the \$1 coin, and he will be our lead-off witness.

Following your testimony, Jim, I hope you can join us up here on the podium, if you wish, and participate in the rest of the hearing.

After Congressman Kolbe's testimony, we have four other experts on this issue, Theodore E. Allison, Assistant to the Federal Reserve Board for Federal Reserve System Affairs, who will give the Fed's view on their savings under this bill. Dr. George McCandless is a Professor of Economics at the University of Chicago and

has authored studies on the potential savings of H.R. 1245. Thomas Schatz, Acting Director of Citizens Against Government Waste, has written extensively on the benefits of this bill. James Benfield is the Executive Director of the Coin Coalition and has extensive knowledge on this bill's impact on the private sector.

Chairman KILDEE. At this point, Jim, you may come up to the table and give your testimony.

**STATEMENT OF HON. JIM KOLBE, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF ARIZONA**

Mr. KOLBE. Thank you, Mr. Chairman, and I think you are remarkably on time, considering the way things generally operate around here. I will join you, if I might, on the podium afterwards. I promised one of the television stations I would give a brief comment, since they are on deadline, outside, and then I will join you right afterwards.

I do appreciate this opportunity to come and talk about the economic impacts of a coin dollar, which is embodied in H.R. 1245. I won't talk specifically about the legislation on the coin dollar itself and the progress of that legislation, but rather would like to concentrate my remarks on the economic impact. I have a complete statement I would like to insert into the record, if I might.

Chairman KILDEE. Without objection, that will be included in the record.

Mr. KOLBE. We are all aware that Congress may well send the balanced budget amendment to the States this year. So I think it is very appropriate that the Budget Committee at this time begin looking into every aspect of government finance that could affect the revenues or the spending side of the budget and ways in which we can reduce the national debt.

I want to talk to you about one of those possible ways this morning, something that could save actually hundreds of millions of dollars a year, by substituting a coin for our paper dollar. What makes calculating the savings from this—the savings that would result from this \$1 coin so tricky is that there are an awful lot of variables.

The savings flow from many corners of the Federal Government. For example, the money to mint coins is appropriated from Congress, but the cost of printing paper money is an internal, nonappropriated expense of the Federal Reserve System. The profit from minting coins, called seigniorage, which you will hear more about later, is held in a separate Treasury account. As an asset of the Government, it reduces the need to borrow money to fund the national debt.

The accounting for paper money is different, but the end result is very similar. The Federal Reserve takes the portfolio earnings on Treasury bonds used to back paper money and returns that money to the general treasury.

Then we have to consider the fact that coins last longer, in fact, a lot longer than paper money. Paper dollar only survives 17 to 18 months on average, while a coin lasts 30 years or more.

Well, I could go on, but I think I will let the expert witnesses speak on some of these technical points. The bottom line for this

task force is that we can find savings, the total, several hundred million dollars, perhaps as much as \$1 billion, annually.

I have been involved in this issue for several years now and one of the questions that gets asked at every hearing or every time I appear on some kind of a conference or a talk show on this subject—this is a very popular issue on talks shows, I might add—why did the Susan B. Anthony fail. The conventional wisdom, of course, is that it failed because Congress failed to eliminate the \$1 bill at the same time; and secondly that it created a \$1 coin that, because of its appearance, size and color, was inevitably confused with the quarter.

Well, these reasons are true, Mr. Chairman, but I would like to add another reason. In 1979, the Government acted in a vacuum when it created the Susan B. Anthony silver dollar. There was not proper consultation with the private sector. The result was a poorly designed coin that was improperly introduced and thus never successfully implemented.

What is different now is that the leadership and support for a \$1 coin is coming from the private sector. That is the way it should be working, under a single coalition. The coin-operated industries, mass transit, the visually impaired, convenience stores, chain restaurants, and many others have all worked together to agree on a single piece of legislation. Our job in Congress is to listen and to respond to that mandate.

I want to come back again to the balanced budget amendment. There will be comments that will be made during the discussion on this issue of a coin dollar, that it is not popular, that polls show the public is against it; and I would agree, the polls do show that. I would also suggest that the experience of other countries that have introduced it have shown that, once done and implemented, it rapidly gains in popularity.

But the point I want to make is that we in Congress are accused sometimes of not leading, of not making some of the tough decisions that have to be made in order to make reductions in spending or to find other ways in which the Federal Government can have revenues. This is one way that may require going a little bit against popular opinion, but it is an easy way, and one in which we can fairly painlessly get some very substantial revenue to the Federal Government. It is an idea whose time has come.

We are going to be required on the Budget Committee to look for very, very difficult ways to save money, either cut spending or provide additional revenue. Those choices are not going to be easy. I would suggest, when a list is made of all the possible alternatives that we have, this will be one that looks surprisingly easy. And so to those who say it is not popular, we shouldn't do it, I would suggest that nothing that we have to do with regard to the budget, the spending, or the revenue side is going to be terribly popular.

As complex as many of the arguments will seem, they all can be reduced to a television sound bite. Paper is difficult to count and process; coins are easy. Coins are reusable; paper is a disposable. Coins save money; the inefficiency of paper money knows no boundaries. Both the private and the public sectors are very much affected by it.

I am convinced that we will have a coin dollar in this country. I think it is absolutely inevitable. The only question is how much time and money will we waste before we have one.

Mr. Chairman, I would be happy to answer any questions, but I think you probably might want to listen to the experts on this subject.

[The prepared statement of Hon. Jim Kolbe follows:]

STATEMENT OF HON. JIM KOLBE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. Chairman, thank you for the opportunity to testify this morning before the task force.

As you know, there is a good chance that the Congress will send the balanced budget amendment to the States later this year. Thus, it is appropriate that the Budget Committee look at every aspect of government finance that could affect the budget, revenues, and the national debt.

What makes calculating the savings that would result from this \$1 coin so tricky is that there are so many variables, and the savings flow from many corners of the Federal Government. For example:

The money to mint coins is appropriated from Congress, but the cost of printing paper money is an internal, nonappropriated expense of the Federal Reserve System.

The profit from minting coins (called seigniorage) is held in a separate Treasury account, and, as an asset of the Government, reduces the need to borrow money to fund the national debt. The accounting for paper money is different, but the end result is similar; the Federal Reserve takes the portfolio earning on Treasury bonds used to back paper money and returns that money to the general treasury.

Then we must consider that coins last much longer than paper money: 17 months for paper versus 30 years for coins.

Well, I could go on, but I would rather let our expert witnesses speak to these technical points. The bottom line for this task force is that the savings total several hundred million dollars annually.

I have been involved with this issue for several years now and friends often ask me why the Anthony dollar failed. The conventional wisdom is the failure to eliminate the \$1 bill and the Anthony's confusion with the quarter.

But I would like to add another reason.

In 1979, the Government acted in a vacuum when it created the Susan B. Anthony dollar. There was not proper consultation with the private sector, and we wound up with a poorly designed coin that was improperly introduced.

What is different now is that the leadership and support for a \$1 coin is coming from the private sector. That is the way it should be. Working under a single coalition, the coin operated industries, mass transit, the visually impaired, convenience stores, chain restaurants and many others have all worked together to agree on a single piece of legislation. Our job in Congress is to listen and to respond to that mandate.

As complex as many of the arguments will seem, they all can be reduced to a television sound bite. Paper is difficult to count and process; coins are easy. Coins are reusable; paper is a disposable. Coins save money. The inefficiency of paper money knows no boundaries; the private and public sectors are both affected.

I am convinced that we will have a \$1 coin. The only question is how much time and money will we waste before we have one?

Chairman KILDEE. Thank you very much, Congressman Kolbe, for your testimony. You have discussed this with me many times. I really have no questions of you right now myself.

Maybe Mr. Houghton has some questions.

Mr. HOUGHTON. No I don't, Mr. Chairman. Thank you.

Chairman KILDEE. All right. We will dismiss you at this time, Jim, and you may join us up at the podium.

Mr. KOLBE. Thank you. I will.

Chairman KILDEE. Now the panel may come up to the table.

STATEMENTS OF THEODORE E. ALLISON, ASSISTANT TO THE BOARD FOR FEDERAL RESERVE SYSTEM AFFAIRS; GEORGE T. McCANDLESS, JR., ASSISTANT PROFESSOR, DEPARTMENT OF ECONOMICS, UNIVERSITY OF CHICAGO; THOMAS A. SCHATZ, SENIOR VICE PRESIDENT, CITIZENS AGAINST GOVERNMENT WASTE; AND JAMES C. BENFIELD, COIN COALITION

Mr. KILDEE. You may proceed in the order that I called your names or in the order that you have arranged among yourselves.

Mr. Allison, unless you arranged a different order among yourself.

Mr. ALLISON. We will go in alphabetical order, it sounds like.

Good morning, Mr. Chairman. I am very pleased to have this opportunity to present estimates of the impact on the Federal Reserve System, and I might add, on the Government budget more broadly, of substituting a \$1 coin for the \$1 bank note now in circulation, as would be required by H.R. 1245.

In brief, a \$1 coin could produce sizable cost savings for the Federal Government as a whole for three reasons. First, production costs for \$1 coins, over time, would be lower than for \$1 notes. Second, Federal Reserve processing costs for incoming coin deposits would be lower than for incoming note deposits. And third, the Treasury's interest saving as a result of \$1 coin seigniorage would be greater than the Federal Reserve's interest earnings derived from \$1 notes. This, incidentally, is principally because the number of \$1 coins in circulation is likely to exceed significantly the number of \$1 notes.

These savings would aggregate to about \$400 million a year on average, in present value terms; that is, with all future costs and costs and benefits discounted back to the present, over the next 30 years. The potential savings can be achieved, however, only if the \$1 note is withdrawn from circulation.

Moreover, the budgetary savings would be even larger, more than \$500 million a year, under the assumptions that underlie my analysis; more than \$500 million if the \$2 note were not made available.

Before turning to the impact of a \$1 coin on the Federal Reserve's financial position and the specific questions that you raised in your letter inviting us to testify, I would like to explain briefly the ways in which the Federal Government budget would be affected by issuance of a \$1 coin. As will be seen, the budgetary impacts would be somewhat complex and the overall savings would not come solely or even predominantly through the Federal Reserve.

Let me start with coins. Coins are placed into circulation in a process in which the Department of the Treasury, first, mints new coins in accord with the needs of the public, using appropriated budget funds for all but the metal cost; two, books a "profit," called seigniorage, equal to the difference between the face value of the coins and their cost of production, which is treated as a means of financing the Federal budget; and three, deposits the coins with the Federal Reserve Banks for credit to the Treasury Department's checking account.

Thus, in budgetary terms, production of additional coins, if, for example, the—a \$1 coin were to replace the \$1 note, production of

additional coins would raise budgeted outlays by the Treasury for mint operations in the year of production, would increase seigniorage, and consequently reduce budgeted outlays for interest on the borrowing displaced thereby, in the year of production and in all future years.

The mechanism by which notes are placed into circulation is rather different. First, the cost of new banknotes enters the Federal budget indirectly, as contrasted with the cost of coins, which as I say, enters directly. New notes are purchased by the Federal Reserve from the Bureau of Engraving and Printing, a unit of the Treasury Department, at a price set to recover the Bureau's full cost of production. The Bureau's expenses are not included within the Federal budget. Instead, the Federal Reserve's outlays for the production of new notes are assessed against the earnings of the Federal Reserve Banks, thereby reducing the net earnings of the Federal Reserve System that are remitted to the Treasury Department and, accordingly, that show up in miscellaneous receipts in the budget of the Federal Government. Whereas for coin, production costs go in as an expense in the budget, note production costs go in as a reduction in revenues; that is, the Federal Reserve earnings that are paid to the Treasury.

The profit on the banknote issue is also accounted for differently than the profit or seigniorage on the coin issue. Banknotes in circulation are a liability of the Federal Reserve Banks for which the Reserve Banks hold corresponding earning assets. Decreases in banknotes in circulation—for example, if the \$1 note were withdrawn—decreases in banknotes in circulation would result in lower Federal Reserve portfolio earnings and concomitantly lower budgetary miscellaneous receipts for the Federal Government.

As a final budgetary implication, processing incoming deposits of coins is less costly for the Federal Reserve Banks than processing incoming deposits of notes.

Let me take up each of these items in turn now, if I may, and you may wish to follow along. If you have a copy of my statement before you, you may wish to follow along on my attachment, which is a table showing 30 years of impacts, under the assumptions that are spelled out in attachment 1 that I am not going to go into in any detail about.

First, let me start with mint operations, and that is column 1 in this table. In the U.S. budgetary system, mint expenses other than for metal are treated as outlays subject to the budget and appropriations processes. In manufacturing the replacement stock of 9 billion \$1 coins assumed to be necessary at the outset of the replacement period, the mint initially would incur one-time budgeted outlays of \$164 million. That is roughly the first 6 or 7 years. Thereafter, the mint would incur the cost of producing only enough new \$1 coins to replace those that were lost or mutilated during the year and to satisfy the public's need for growth in the coin stock.

As shown in attachment 2, the average annual budgeted outlays for the mint for \$1 coins—under my assumptions—discounted to the present, would be \$20 million, average annual costs.

Second, let me turn to seigniorage and the interest savings. Unlike tax receipts and other governmental receipts, which are compared to governmental outlays in calculating the surplus or deficit, seigniorage, which is the difference between the face value and the cost of the year's coin production, is treated as a means of financing a deficit or of reducing debt in the year of a surplus. Seigniorage thus reduces the Treasury's borrowing requirements in the year in which the coins are manufactured and in every year in the future in which the coins remain in circulation. In manufacturing the 9-billion-coin replacement stock and the smaller annual amounts thereafter, the Treasury would realize seigniorage of \$54 billion by the end of the 30-year assumed life of the coin, and would avoid borrowing of the same amount. The average annual interest savings discounted to the present would be \$430 million per year.

Let me turn now to the third column, which deals with Federal Reserve portfolio earnings, and this is going to be an offset to the seigniorage and the interest savings shown in column 2.

The Treasury will be receiving the Federal Reserve's earnings on assets associated with the stock of 6 billion \$1 Federal Reserve notes assumed to be outstanding at the outset of the replacement process. For purposes of the Federal budget, these earnings are created as a miscellaneous receipt. If the \$1 notes were withdrawn from circulation, and perhaps partially replaced by \$2 notes, there would be a corresponding reduction in the Federal Reserve's portfolio, and the Treasury would lose the Federal Reserve's earnings thereon, estimated at \$170 million per year, on average, in present value terms. Now, you can see that that is a lot smaller than the \$430 million average annual savings in interest that would be realized from the seigniorage.

The fourth column deals with the Federal Reserve earnings as a result of new-note costs, and this would be an offset to the cost of minting coins shown in column 1, so we will be comparing column 4 with column 1. Upon introduction of a \$1 coin and consistent with the mint's ability to manufacture the initial replacement stock of \$1 coins, the Federal Reserve would discontinue its purchases of new \$1 notes and perhaps increase its purchases of new \$2 notes. The net savings in new-note costs would increase the Federal Reserve's earnings paid to the Treasury by an assumed average annual discounted amount of \$109 million. So that is well in excess of the budgeted cost as you can see of manufacturing the coins.

Finally, column 5 deals with Federal Reserve processing costs. Depository institutions deposit at Federal Reserve Banks currency and coin that exceeds their requirements. Note deposits are verified by the Federal Reserve in a process in which each note is counted, examined for authenticity, checked for fitness, and if unfit, shredded, or if fit, held in the vault for further circulation. Coin deposits, on the other hand, are verified in bulk, by weighing, at about half the cost of processing notes. In addition, Reserve Banks would likely receive fewer \$1 coins from circulation, relative to the quantity in circulation, than they do \$1 notes.

Taking these differences into account, the Federal Reserve would realize discounted average processing cost savings of \$47 million per year. The total financial impact on the Federal Government would be the sum of the separate impacts described, estimated to be a savings of \$395 million per year. These impacts have all been expressed as averages of discounted present values of future costs and savings over the 30-year life of the coin.

Now, I might just note from table 2, Mr. Chairman, that except for the initial year in which it is assumed that some notes will be produced, some coins will be produced, and some additional \$2 notes printed—with the exception of that first year, before any of those are issued, every year shows a positive Federal budget impact. Every year shows a positive impact. The average is \$395 million.

I might note that the budgetary savings of \$395 million per year assumes that 25 percent of the value of \$1 notes in circulation would be replaced by \$2 notes. Those savings would be increased considerably if \$2 notes were not made available. Our estimate is that without \$2 notes, the average annual savings would rise from \$395 million to \$511 million per year.

You have invited us to address the possible need for an additional currency printing facility for the Bureau of Engraving and Printing if a new \$1 coin were not introduced. That question is difficult to answer, in part because the Bureau of Engraving and Printing is developing new and potentially much more efficient printing equipment that could increase the capacity of the present facilities significantly—these are new printing presses—and in part because the Fort Worth facility has potential for quite a bit of horizontal expansion.

It must be stressed, however, that all three relevant governmental entities—the Federal Reserve System, the Bureau of the Mint, and the Bureau of Engraving and Printing, not to mention the multitude of currency handlers and currency equipment manufacturers in the private sector—are involved continuously in long-term planning for facilities and equipment so that they can be prepared to meet efficiently the public's need for currency and coin. Consequently, it is essential that in connection with any \$1 coin legislation, there be an unequivocal commitment to discontinuing circulation of the \$1 note, because without such a commitment, the uncertainty about future requirements, as we wait—as we, the relevant governmental units involved here, wait for the public's preference to become clear, we will inevitably overinvest in production and processing equipment. There will be too much coin production equipment, too much currency production equipment, and too much currency and coin processing equipment.

I have generally addressed the issues that you asked us to cover, but I also have included in attachment 3 to my statement detailed answers to all of the specific questions. If you later wish any follow-up information, I am available to you or your staff at any time.

I appreciate having this opportunity to present our estimates of the budgetary impact of replacing the \$1 note with a new coin. If you have any questions, I would be pleased to try to answer them.

Chairman KILDEE. Thank you very much, Mr. Allison. Your entire testimony, including your attachments will be made a part of the record.

Mr. ALLISON. Thank you.

Chairman KILDEE. I appreciate your very specific response to the questions that I asked you in my letter, and they will be made a part of the record. I appreciate that. We will continue with the panel and then have questions of the entire panel at the end.

[The prepared statement of Theodore E. Allison follows:]

For release on delivery
10:00 A.M. E.D.T.
May 28, 1992

Testimony of

Theodore E. Allison

Assistant to the Board
for Federal Reserve System Affairs

Board of Governors of the Federal Reserve System

before the

Task Force on Economic Policy, Projections, and Revenues

of the

Committee on the Budget

U. S. House of Representatives

May 28, 1992

Good morning, Mr. Chairman. I am pleased to have this opportunity to present estimates of the impact on the Federal Reserve System of substituting a one-dollar coin for the one-dollar banknote now in circulation, as would be required by H.R. 1245, the United States One Dollar Coin Act of 1991. In brief, a dollar coin could produce sizeable cost savings for the Federal government as a whole, for three reasons: First, production costs for dollar coins, over time, would be lower than for dollar notes. Second, Federal Reserve processing costs for incoming coin deposits would be lower than for incoming note deposits. And, third, the Treasury's interest saving as a result of \$1 coin seigniorage would be greater than the Federal Reserve's interest earnings derived from \$1 notes (this because the number of dollar coins in circulation is likely to exceed significantly the number of dollar notes). These savings would aggregate to about 400 million dollars a year on average, in present value terms, over the next thirty years.

The potential savings can be achieved, however, only if the one-dollar note is withdrawn from circulation. Moreover, the budgetary savings would be even larger -- more than 500 million dollars a year -- if the \$2 note is not made available.

Before turning to the impact of a dollar coin on the Federal Reserve's financial position and to the specific questions raised in your invitation for this testimony, I would like to explain briefly the ways in which the Federal government

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budget would be affected by issuance of a dollar coin. As will be seen, the budgetary impacts would be somewhat complex, and the overall savings would not come solely -- or even predominantly -- through the Federal Reserve.

Coins are placed into circulation in a process in which the Department of the Treasury (1) mints new coins in accord with the needs of the public (using appropriated budget funds for all but the metal cost), (2) books a "profit" (called seigniorage) equal to the difference between the face value of the coins and their cost of production, which is treated as a means of financing the Federal budget, and (3) deposits the coins with the Federal Reserve Banks for credit to the Treasury Department's checking account. Thus, in budgetary terms, production of additional coins would (a) raise budgeted outlays by the Treasury for Mint operations, in the year of production, (b) increase seigniorage and consequently reduce budgeted outlays for interest on the borrowing displaced thereby, in the year of production and in all future years.

The mechanism by which notes are placed into circulation is rather different. (1) The cost of new banknotes enters the Federal budget indirectly: New notes are purchased by the Federal Reserve from the Bureau of Engraving and Printing, a unit of the Treasury Department, at a price set to recover the Bureau's full cost of production. The Bureau's expenses are not included within the Federal budget. Instead, the Federal

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Reserve's outlays for the production of new notes are assessed against the earnings of the Reserve Banks, thereby reducing the net earnings of the System remitted to the Treasury Department and, accordingly, miscellaneous receipts in the budget of the Federal government. (2) The "profit" on the banknote issue also is accounted for differently than the "profit" (or seigniorage) on the coin issue: Banknotes in circulation are a liability of the Federal Reserve Banks for which the Reserve Banks hold corresponding earning assets. Increases (or decreases) in banknotes in circulation would result in higher (or lower) Federal Reserve portfolio earnings and concomitantly higher (or lower) budgetary miscellaneous receipts of the Federal government.

As a final budgetary implication, processing incoming deposits of coins is less costly for the Federal Reserve Banks than processing incoming deposits of notes.

To summarize, the Federal government budgetary implications would fall into five categories: (1) increased budgetary expenses at the Treasury Department's Bureau of the Mint, which would produce the dollar coins; (2) Treasury interest savings as a consequence of the seigniorage derived from issuing one-dollar coins; (3) reduced Federal Reserve earnings on its portfolio of securities, which would decline as a result of withdrawing one-dollar notes from circulation (and concomitant lower net Federal Reserve earnings paid to the Treasury as a

budgetary miscellaneous receipt); (4) reduced costs at the Federal Reserve for purchases of one-dollar notes (net of any increased cost of purchasing two-dollar notes); and (5) reduced costs at the Federal Reserve because processing incoming deposits of dollar coins is more economical than processing incoming deposits of dollar notes. As is clear, these budgetary effects are highly interrelated and therefore should be considered as a whole. Let me now take up the budgetary impacts in turn.

(1) Mint expenses. In the U.S. budgetary system, Mint expenses other than for metal are treated as outlays subject to the budget and appropriations processes. (Metal purchases are made through the Coinage Metal Fund, a revolving account not subject to budget or appropriations.) In manufacturing the replacement stock of 9 billion \$1 coins assumed to be necessary at the outset of the replacement period, the Mint initially would incur one-time budgeted outlays of \$164 million (9 billion coins at an assumed \$80 per thousand coins times an assumed 20-percent share of the \$80 for budgeted operating costs, plus an additional \$20 million for design and start-up costs). [The specific assumptions used in estimating these impacts may be found in Attachment 1.] Thereafter, the Mint would incur the costs of producing only enough new \$1 coins to replace those that were lost or mutilated during the year and to satisfy the public's need for growth in the coin stock. As shown in Attachment 2, the average annual budgeted outlays of the Mint for \$1 coins, discounted to the present, would be \$20 million.

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(2) Seigniorage and interest savings. Unlike tax receipts and other governmental receipts, which are compared to governmental outlays in calculating the surplus or deficit, seigniorage -- the difference between the face value and the cost of the year's coin production -- is treated as a means of financing a deficit (or of reducing debt in a year with a surplus). Seigniorage thus reduces the Treasury's borrowing requirements, in the year in which the coins are manufactured and in every year in the future in which the coins remain in circulation. In manufacturing the 9-billion-coin replacement stock and the smaller annual amounts thereafter, the Treasury would realize seigniorage of \$54 billion by the end of the 30-year assumed life of the coin, and would avoid borrowing of the same amount. The average annual interest savings, discounted to the present, would be \$430 million per year.

(3) Federal Reserve portfolio earnings. The Treasury will be receiving the Federal Reserve's earnings on assets associated with the stock of 6 billion \$1 Federal Reserve notes assumed to be outstanding at the outset of the replacement process. For purposes of the Federal budget, these earnings are treated as a miscellaneous receipt. If the \$1 notes were withdrawn from circulation, and perhaps partially replaced by \$2 notes, there would be a corresponding reduction in the Federal Reserve's portfolio, and the Treasury would lose the Federal Reserve earnings thereon -- estimated at \$170 million per year, on average in present value terms.

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(4) Federal Reserve new-note costs. Upon introduction of a \$1 coin, and consistent with the Mint's ability to manufacture the initial replacement stock of \$1 coins, the Federal Reserve would discontinue its purchases of new \$1 notes and perhaps increase its purchases of new \$2 notes. The net savings in new-note costs would increase the Federal Reserve's earnings paid to the Treasury by an assumed average annual discounted amount of \$109 million.

(5) Federal Reserve processing costs. Depository institutions deposit at Federal Reserve Banks currency and coin that exceeds their requirements. Note deposits are verified by the Reserve Banks in a process in which each note is counted, examined for authenticity, checked for fitness, and, if unfit, shredded or, if fit, held in the vault for further circulation. Coin deposits, on the other hand, are verified in bulk -- by weighing -- at about half the cost of processing notes. In addition, Reserve Banks would likely receive fewer \$1 coins from circulation, relative to the quantity in circulation, than they do \$1 notes. Taking these differences into account, the Federal Reserve would realize discounted average processing-cost savings of \$47 million dollars per year.

The total financial impact on the Federal government would be the sum of the separate impacts described above -- estimated to be a savings of \$395 million per year. These impacts have all been expressed as averages of discounted present

values of future costs and savings over the 30-year life of the coin. (The year-by-year impacts are shown in Attachment 2.)

I might note that the budgetary savings of \$395 million per year assumes that 25 percent of the value of \$1 notes in circulation would be replaced by \$2 notes. Those savings would be increased considerably if \$2 notes were not made available. Our estimate is that, without \$2 notes, the average annual savings would rise from \$395 million to \$511 million per year.

You have invited us to address the possible need for an additional currency printing facility for the Bureau of Engraving and Printing if a new \$1 coin were not introduced. That question is difficult to answer, in part because we understand that the Bureau is developing new, and potentially much more efficient, printing equipment that could increase the capacity of the present facilities significantly and in part because the Fort Worth facility has potential for horizontal expansion. It must be stressed, however, that all three relevant governmental entities -- the Federal Reserve System, the Bureau of the Mint, and the Bureau of Engraving and Printing (not to mention the multitude of currency handlers and currency-equipment manufacturers in the private sector) -- are involved continuously in long-term planning for facilities and equipment so that they can be prepared to meet efficiently the public's need for currency and coin. Consequently, it is essential that in

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connection with any \$1-coin legislation there be an unequivocal commitment to discontinuing circulation of the \$1 note. Without such a commitment, the uncertainty about future requirements, as we wait for the public's preference to become clear, will inevitably lead the three entities as a whole to overinvest in production and processing equipment.

I have generally addressed the issues that you asked us to cover, but I also have included in Attachment 3 to my statement more detailed answers to all of the specific questions. If you later wish any follow-up information, I am available to you or your staff at any time.

I appreciate having this opportunity to present our estimates of the budgetary impact of replacing the \$1 note with a new coin. If you have any questions, I would be pleased to try to answer them.

Attachment 1

**Assumptions Used in Estimating the Budgetary Impacts
of Substituting a One-Dollar Coin for the One-Dollar Note**

1. There will be 6 billion \$1 notes in circulation upon initial introduction of the \$1 coin.
2. There will be 10 billion higher-denomination notes (\$5 to \$100) in circulation upon initial introduction of the \$1 coin.
3. The number of notes in circulation will grow at 5 percent per year for the next 30 years.
4. The average life of a \$1 note is 1.45 years.
5. Upon introduction of a \$1 coin and withdrawal of the \$1 note, the average life of the \$2 note will be 1.45 years.
6. The average life of a higher-denomination note is 2.06 years.
7. The average life of a \$1 coin will be 30 years.
8. Upon introduction of a \$1 coin and withdrawal of the \$1 note, the public will choose to use \$2 notes to the extent of 25 percent of the value of the \$1 notes then in circulation.
9. Upon introduction of a \$1 coin, withdrawal of the \$1 note, and substitution of \$2 notes to the extent indicated above, the public will choose to hold two coins for each remaining \$1 note then in circulation.
10. The cost of printing notes (of all denominations) will be \$35 per thousand. (All production and processing costs are assumed to be constant over the next 30 years; and all future costs are discounted to the present at a real rate.)
11. Upon discontinuing the printing of \$1 notes, the Federal Reserve's cost of acquiring higher-denomination notes from the Bureau of Engraving and Printing will increase by \$8.00 per thousand.
12. The cost of producing \$1 coins, including their shipment to Federal Reserve Banks, will be \$80.00 per thousand.
13. The proportion of the coin cost accounted for by metal will be 80 percent; the balance will be for Mint operations.

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14. The Mint will be able to produce a maximum of 2 billion \$1 coins per year during the transition period.
15. The Mint will incur start-up costs in connection with design and production of the new coin of \$20 million.
16. The stock of notes in circulation will be deposited at Federal Reserve Banks, on average, 1.30 times per year.
17. The stock of \$1 coins in circulation will be deposited at Federal Reserve Banks, on average, .30 times per year.
18. The Federal Reserve's cost of processing deposits is \$6.90 per thousand notes and \$3.68 per thousand coins.
19. The Federal government's real borrowing rate, the real rate of return on the Federal Reserve's portfolio, and the real rate for discounting future costs and savings to the present will all be 3 percent.

Attachment 2

Estimated Impact on the Federal Government Budget
of Substituting a One-Dollar Coin for the One-Dollar Note

Year	(1) Mint Operations For New Coins (-)	(2) Interest Savings From Seigniorage (+)	(3) F.R. Earnings -- Portfolio (-)	(4) F.R. Earnings -- New Notes (+)	(5) F.R. Earnings -- Processing (+)	Total Federal Budget Savings
0	52,000	55,200	0	(26,250)	0	(23,050)
1	31,068	107,184	53,883	22,220	18,753	63,207
2	30,163	156,094	76,138	39,716	23,719	113,227
3	29,285	202,063	96,835	55,950	28,393	160,288
4	28,432	245,222	116,040	70,977	32,785	204,512
5	27,603	285,696	133,821	84,848	36,902	246,022
6	28,159	325,949	151,512	98,639	41,039	285,956
7	13,075	339,010	154,454	100,554	41,890	313,925
8	13,329	352,129	157,453	102,507	42,753	326,607
9	13,588	365,312	160,510	104,497	43,631	339,342
10	13,852	378,567	163,627	106,526	44,522	352,136
11	14,121	391,899	166,804	108,595	45,428	364,997
12	14,395	405,317	170,043	110,703	46,349	377,931
13	14,675	418,825	173,345	112,853	47,286	390,944
14	14,960	432,432	176,711	115,044	48,238	404,044
15	15,250	446,143	180,142	117,278	49,207	417,236
16	15,546	459,966	183,640	119,555	50,193	430,528
17	15,848	473,907	187,206	121,877	51,196	443,926
18	16,156	487,972	190,841	124,243	52,217	457,436
19	16,470	502,170	194,546	126,656	53,256	471,065
20	16,789	516,505	198,324	129,115	54,313	484,820
21	17,115	530,985	202,175	131,622	55,390	498,707
22	17,448	545,617	206,101	134,178	56,486	512,732
23	17,786	560,407	210,103	136,783	57,602	526,903
24	18,132	575,361	214,182	139,439	58,739	541,226
25	18,484	590,488	218,341	142,147	59,897	555,706
26	18,843	605,793	222,581	144,907	61,076	570,352
27	19,209	621,284	226,903	147,721	62,277	585,170
28	19,582	636,967	231,309	150,589	63,500	600,165
29	19,962	652,848	235,800	153,513	64,746	615,346
30	20,350	668,936	240,379	156,494	66,016	630,718
Averages	20,054	430,202	170,766	109,145	47,026	395,552

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Attachment 3

Responses to Questions in Chairman Kildee's Letter
To Chairman Greenspan of May 4, 1992

1. What is the cost of processing paper currency, and what is the cost of processing coins at the Federal Reserve?

Depository institutions deposit at Federal Reserve Banks currency and coin that exceeds their requirements. Note deposits are verified by the Reserve Banks in a process in which each note is counted, examined for authenticity, checked for fitness, and, if unfit shredded or, if fit, held in the vault for further circulation -- all at a cost to the Federal Reserve (in 1991) of \$6.90 per thousand notes processed. Coin deposits, on the other hand, are verified in bulk -- by weighing -- at a cost (in 1991) of \$2.51 per thousand coins.

In addition, based on our experience with other coin denominations, Reserve Banks would likely receive fewer \$1 coins from circulation, relative to the quantity in circulation, than they do \$1 notes.

Taking both sets of differences into account, the Federal Reserve would realize discounted average processing-cost savings of \$47 million dollars per year over the 30-year period under analysis.

2. What savings would accrue to the Federal Reserve from printing costs avoided, if a \$1 coin were to replace the \$1 bill? Assume that \$2 bills replace some of the \$1 bills in circulation

Upon introduction of a \$1 coin, and consistent with the Mint's ability to manufacture the initial replacement stock of \$1 coins the Federal Reserve would discontinue its purchases of new \$1 notes and perhaps increase its purchases of new \$2 notes. Under the assumptions outlined in Attachment 1, in particular that the public would choose to use \$2 notes to the extent of 25 percent of the value of \$1 notes in circulation, the Federal Reserve's net savings in new-note costs would increase its earnings paid to the Treasury by an assumed average annual discounted amount of \$109 million.

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3. Both Australia and Canada have replaced their \$1 bills with \$1 coins yet between 40 and 50 percent of their \$1 bills have never been returned from circulation. Does the Federal Reserve have any estimates on how many U.S. \$1 bills will never be returned? What impact would outstanding \$1 bills have on portfolio earnings at the Fed?

The Federal Reserve does not have an estimate of the number of \$1 notes that are unlikely -- with or without a \$1 coin -- to be returned. The number of notes that have been lost, destroyed, or placed in numismatic collections is basically inestimable. If the \$1 note were to be replaced by a \$1 coin, some additional \$1 notes would likely be saved as a consequence.

The Treasury receives the Federal Reserve's earnings on assets associated with the stock of Federal Reserve notes in circulation, including those that may have been lost, destroyed, or placed in numismatic collections. For purposes of the Federal budget, these earnings are treated as a miscellaneous receipt. Upon withdrawal of \$1 notes from circulation, there would be a corresponding reduction in the Federal Reserve's portfolio, and the Treasury would lose the Federal Reserve earnings thereon estimated at \$170 million per year, on average in present value terms.

If, however, withdrawal of \$1 notes resulted in an increase in the number kept for numismatic purposes, the reduction in the Federal Reserve's portfolio and in the Treasury's lost Federal Reserve earnings would be mitigated commensurately.

4. Based on the current growth in demand for paper currency, does the Fed foresee the need for additional Bureau of Engraving and Printing facilities? Is the cost of a printing facility factored into the printing costs paid by the Fed?

Based on the 6.6-percent growth rate in the public's demand for currency notes during the last five years, the Federal Reserve's requirement for new notes could reach the present capacity of the BEP's two production facilities around the year 2000. However, the Bureau has under development new production equipment that could increase significantly the capacity of the existing facilities. We understand also that there is a potential for horizontal expansion of the Fort Worth facility.

The price paid by the Federal Reserve to the Bureau of Engraving and Printing, by law, includes all of the

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BEP's costs, including the costs of facilities and equipment.

5. What would the total financial impact of H.R. 1245 be on the Federal Reserve System?

The total financial impact of H.R. 1245 on the Federal Reserve System would be reflected in columns (3), (4), and (5) of Attachment 2. The 30-year average annual impact, discounted to the present, would be a reduction in Federal Reserve net earnings paid to the Treasury of \$14 million.

This \$14 million reduction in Treasury revenues would be more than made up for by the direct effects to the Treasury of H.R. 1245, chiefly the increased seigniorage on the coin issue.

Chairman KILDEE. On my list we have Mr. McCandless next.

Mr. McCANDLESS. Thank you.

The U.S. has had, for much of its history, a fairly—a relatively stable price level. The dollar of 1800 and the dollar of 1933 had approximately the same purchasing power. Since that time, the price level has risen some 11 times. The dimes that John D. Rockefeller handed out are the dollars of today. The largest current coin in popular circulation is equal to 2.2 of a 1933 cent. So the inflation of the past 60 years has made Alexander Hamilton's fractional coin system for the United States small change. Replacing the \$1 bill with a \$1 coin is the first step in rationalizing the U.S. coinage system.

In this rationalization process, there are substantial savings to both the public and the Government. The high circulation of low denominational money, such as the \$1 bill, results in its being worn out in something like 1.4 years. The savings in terms of production processing and seigniorage—the gains, the profits that were mentioned just a minute ago that accrued from the Treasury to the production of coins over the next 30 years have an estimated present value of some \$20 billion, if evaluated at a 2 percent discounted rate, or \$14 billion at a 5 percent rate. That difference is because the costs are front loaded and the returns are higher in the future.

That present value converts into constant Government savings of some \$862 million a year. This estimate is substantially different from some of the earlier estimates, but not really all that much different from the one just announced by the Federal Reserve.

The main results of the Federal Reserve are similar to mine, except for several points. One is that I did not include very much with respect to an increase in the \$2 bill in both Australia and Canada, the other countries that have introduced \$1 coins. They had a substantial circulation of \$2 bills before the introduction of the coin, and that circulation of \$2 bills did not change very much. It went up 20 percent over the original base. Americans do not have a habit of using \$2 bills, and there is not very much reason to expect that a switch to them will take place.

In addition, the old notes—the notes that were in circulation—some 40 percent of them were never returned to the Canadian Government when the coin replaced the \$1 note. There is a seigniorage gain of somewhere around \$93 million a year off of these notes that are never returned and that we never have to pay back.

In addition, the introduction of a \$1 coin reduces the use of quarters. I am living in Chicago and it now takes me six quarters to park for an hour downtown. Switching to a \$1 coin reduces the usage of quarters rather substantially, which results in both production costs and processing cost reduction on the part of the Federal Reserve System. These three items make up a large portion of the difference between my estimate and that of the Federal Reserve.

The second question that I was asked to address in my presentation here was to indicate some of the gains to be made by the public. There are some obvious gains in terms of processing costs and handling costs to those private firms that handle coins. Mass transit, vending machines, coin operated laundry, and telephones

would see reduced costs. Many vending machines currently need bill validators which cost much more to install than a \$1 coin slot (which most machines already have for the Susan B. Anthony). The dollar is already necessary for making change. I recently received Susan B.'s as change when renting a luggage pushcart in the San Juan Airport. The Susan B. is now reappearing in circulation for use in other public transit as well. Other kinds of coin machines, such as parking meters, phones, and laundry machines have reached a price level, because of inflation, where a \$1 coin is an efficient entity to use.

The poor use coin operated machines disproportionately more than the rest of the population. The fact that we don't have a coin system that makes these machines efficient falls more on the poor. In Chicago, the fare on the transit system is \$1.25, but if you purchase 10 tokens, they cost only \$.90 each. The poor are less likely to be able to purchase 10 tokens at one time. A \$1 coin in common circulation could be used in place of tokens and reduce the price for the poor.

There has been public resistance to introduction of a \$1 coin, as indicated by the failure of the Susan B. There was also considerable resistance among professional hockey players to having a helmet introduced. Although everyone would have been better off (safer) wearing helmets, no player wanted to wear a helmet if the other did not (since a helmet restricted vision slightly). The NHL mandated the use of helmets.

Mandating the substitution of a \$1 coin for the \$1 bill, as the NHL mandated the use of helmets, will shift the economy from one equilibrium to another where almost everyone is better off. Canadian surveys of public opinion indicate that once in place, the acceptance of the \$1 coin increases greatly.

Now, there is also a question of, will the introduction of a \$1 coin cause inflation. Given all these reductions in costs, both to the government and to the public, my analysis suggests that it will do quite the opposite, it will retard inflation. The hard part is that accepting a \$1 coin is accepting the fact that inflation has already occurred.

Thank you.

[The prepared statement of George T. McCandless, Jr., follows:]

Statement of
George T. McCandless Jr.
May 28, 1992

1. Introduction

A rational coin system provides low denomination money that is easily transportable provides ease in making change, minimizes the government's cost of providing currency, and contains denominations that conform to the needs of the public. The coinage system is a public good in the sense that an appropriately designed system permits the public to make transactions at minimum cost and inconvenience.

Inflation in the United States over the last thirty years has quadrupled the price level so that a quarter of 1960 has approximately the same purchasing power as a dollar today. The quarter fulfilled a number of coin particular functions in 1960. It was a coin with enough purchasing power so that a large number of transactions could occur with only one of these coins. It was convenient for machine use since a single dollar was worth enough to warrant the intervention of a clerk. Today, there is no coin in circulation that fulfills these functions.

In countries where the government has failed to provide appropriate coinage, the public has been forced to resort to more expensive, private means. In Argentina, where a long history of inflation has driven coins from the economy, the telephone company produces tokens for local calls (long distance calls can not be made from pay phones). Self service laundries require clerks to sell tokens of their own making to use in the machines. Buenos Aires has an extensive network of kiosks (small shops selling newspapers, stamps and other small items that permit the distribution of various kinds of private, special use tokens. However, such a system requires a large number of low paid workers in these Kiosks and these low productivity workers generate considerable social cost.

In the United States, the difficulties caused by the absence of a larger denomination coin has not reached the proportions of the Argentine problems. However, it currently takes between three and twelve quarters to use a coin washing machine, parking meters in a number of cities are requiring four quarters an hour, some pay phones only accept charge cards and vending machine operators have been bearing (or passing on) the expense of installing bill validators as the price of many of their products pass one dollar. While the current situation is not critical, continuing inflation (at even 5% a year) will make the entire coinage system small change. Proposals are heard from some city administrations for eliminating coin use and instituting debit cards for public transport, for parking meters, and for toll collection. The rise of these proposals for infrastructure change are clear evidence that the current coinage system is not fulfilling its functions.

The introduction of a one dollar coin is one step in regularizing the U.S. coinage system. Such a coin fills the same place that the quarter did some thirty years ago. It would serve as a public good that lowers the cost of providing a large number of services. In addition, the replacement of the one dollar bill with a coin generates considerable cost savings for the

government from production costs, processing costs, and seigniorage.

In this paper, we estimate the costs or savings over the next thirty years from switching from a one dollar bill to a one dollar coin beginning in 1993. These estimates are in terms of the present value of the costs or savings evaluated at two different discount rates. We consistently use current prices for services and then discount the cost or savings streams by both 2 and 5 percent. While 2 percent seems very low, it reflects a real discount rate equal to the average real interest rate over the last 150 years of U.S. history. A 5 percent real discount rate is large and represents a fairly shortsighted approach to planning.

We estimate that the present value of the savings in the expenditures of the government over the next thirty years are \$20.247 billions at a 2% discount rate or \$13.925 billions at a 5% discount rate. These numbers represent a constant annual governmental savings of \$886.34 millions (from the 2% estimate) or \$862.76 millions (from the 5% estimate). A very conservative estimate of the present value of private savings over the next thirty is \$14.206 billions (at a 2% discount rate) or \$8.864 billions (at a 5% discount rate). These are equivalent to a constant annual savings of \$621.9 millions (from the 2% estimate) or \$49.1 millions (from the 5% estimate). The 5% estimate is lower because more of the private savings occur in the future which has less value at the 5% discount rate. A conservative estimate of the present value of total private and public savings from the introduction of a dollar coin is \$34.453 billions (at 2%) or \$22.789 billions (at 5%). These present values are equivalent to constant annual savings of \$1.508 billions (from the 2% estimate) or \$1.411 billions (from the 5% estimate).

2. Production costs and benefits that accrue to U.S. Treasury or Federal Reserve System

The cost savings by eliminating the production of the one dollar bill and instead producing a one dollar coin come from several sources. The clearest of these is a direct savings generated by the extra durability of coins with respect to bills. Currently, a one dollar bill has an average life of 1.4 years. The average useful life of a one dollar coin is more like 30 years. The current cost of producing a one dollar bill is \$30 per thousand and the estimated cost of producing the one dollar coin is \$60 per thousand. In every country that has shifted from bills to coin, the coin circulation has stabilized at a level significantly higher than the level of circulation for bills. In Australia, before the two dollar coin was introduced, the one dollar coin circulation was 2.5 times the trend¹ of the dollar bill circulation. In Canada, the one dollar coin circulation reached 1.56 times the trend of the bill circulation by January 1991, and this ratio was still rising, although slowly. We (as did the GAO report on the one dollar coin) use a ratio of 2.0 for an estimate of final coin circulation relative to the trend of the one dollar bill. Assuming that the dollar coin could be implemented by 1993 (this assumption is optimistic and is used only to determine the quantity of dollars that are replaced by coin) we find that the present value cost savings over the next thirty years from the coin are

¹We compare the actual coin circulation to the bill circulation that would have occurred if the growth rate of bills for the five years immediately preceding the introduction of the coin was to have continued.

\$2.631 billions with a discount rate of 2 percent or \$1.463 billions with a discount rate of 5 percent. This difference is so large because the majority of the costs (the production of the initial batch of coins) is faced immediately and the gains appear in the future. The lower discount rate gives greater value to the future.

There are two additional sources of added costs associated with the replacement of a one dollar bill by a one dollar coin. With the removal of the one dollar bill it is expected that there will be further utilization of the two dollar bill.² In both Australia and Canada (countries in which the two dollar bill is much more used in normal commerce than that denomination is used in the United States) the rise in the use of the two dollar bill was fairly modest, slightly less than 20% above trend in Canada and only very slightly above trend in Australia. The introduction of the one dollar coin did not substantially change the way consumers used the two dollar bill in these countries. Given this evidence of habit persistence one should not expect the use (and therefore production) of the two dollar bill to increase by more than 20% in the United States. Since the current usage of the two dollar bill in the United States is so slight, we should expect only small additional costs from this source. However, the cost of producing all other denomination bills will increase slightly. A Federal Reserve report estimates that reducing note production from a 9.2 billion to 6.2 billion, as would happen with the removal of the one dollar bill, would increase per unit cost of the remaining bills from \$30.00 per thousand to 41.83 per billion. However, the quantity of bills produced will increase with time and should gradually return to the \$30.00 per thousand level. Given the growth seen in the use of the 20 dollar bill, we estimate that there will be an 8% annual increase in the production of higher denomination bills and that production will reach the 9.2 billion level in five years. The additional discounted cost of the reduced production is \$221.5 millions (at the 2% discount rate) or \$213.3 millions (at 5%).

One major effect of the introduction of the one dollar coin is the resultant reduction in the use of the quarter. Each one dollar coin will replace four quarters in coin machines and mass transit so the need for quarters (aside from the penny, the largest commonly used denomination coin) should decline. Figure 1 shows the time trend and the actual path of the 20 and 50 cent pieces in Australia after the introduction of the dollar coin in 1984. Circulation of both of these coins declined. In Canada, we do not have circulation figures, but the average production of the 25 cent piece declined after the introduction of the dollar coin. As a conservative estimate, we assume that the production of the quarter stays constant if a dollar coin is introduced and compare the cost of producing this stream to the cost of the trend (2.37%) growth. The introduction of the dollar coin reduces discounted costs of quarter production by \$612.6 millions at 2% or

² The language of H.R.1245 mandates increased production of the two dollar Federal Reserve Notes "to meet anticipated demand. Since it is anticipated that production of the one dollar coin will require that it be phased into circulation and the law mandates the removal from circulation all one dollar Federal Reserve Notes that are turned in to a Federal Reserve Bank beginning only 6 months after the coin is introduced, the intent of this portion of the law is to encourage production and circulation of \$2 notes. Instead, it may well be that banks will process one dollar notes internally and only turn them in after sufficient coin has entered circulation.

\$361.9 millions (at 5%).

The present value of the total production cost savings over thirty years that accrue to the U.S. Treasury from the one dollar coin are \$3.0221 billions if discounted at 2% or \$1.5623 billions if discounted at 5%.

Note: The Bureau of Engraving and Printing is just completing an ambitious expansion project, including a new production facility in Fort Worth, Texas. They have increased their printing capacity to 10.6 billion notes a year. If the dollar coin replaces the dollar bill, they will experience a substantial but short term, reduction in note production and considerable over capacity. However if the current rate of expansion of the money supply and the use of the twenty dollar bill continues, then this excess capacity will disappear in five to eight years.

3. Processing costs and benefits that accrue to Federal Reserve System

It is considerably cheaper for the Federal Reserve System to process coin than it is to process currency. From 1987 to 1990, the average activity cost of processing 1000 notes was \$4.39 and the average activity cost of processing 1000 coins was \$0.348. The total cost (activity cost plus overhead) were \$6.487 and \$0.64 for processing notes and coin, respectively. It is very difficult to estimate how overhead being charged to coin or note processing would change as a result of the switch from bills to coin. It is extremely unlikely that it would increase so we choose the most conservative estimate of no change in overhead directly attributable to the switch from bills to coins. Given this assumption, the average activity costs would then be the appropriate measure of the processing cost differences.

A much larger proportion of the circulating notes passes through the Fed each year than of coin. The GAO report estimated that the Fed processed 156% of the currency in circulation each year and only 72% of the quarters in circulation. (It processes a much smaller portion of pennies. The denomination that the Fed ships out the most of is pennies, the denomination it receives the most of is quarters.) Quarters are the relevant coin for this study since it is likely that the dollar coin will follow a pattern through the economy similar to the quarter. The present value of the savings over thirty years in activity cost to the Fed is \$1.429 billions (at 2%) or \$909.4 millions (at 5%). In estimating these figures, we used the same estimates of circulation for one dollar bills or coins that we used in the production section.

The above calculations are the direct processing savings that come from the dollar coin. The dollar coin will also reduce the use of quarters in the economy and therefore reduce the processing costs that the Fed would otherwise face. We assume, as we did in the production section, that the production of quarters will remain constant rather than follow its current trend. We also assume that 2% of the quarters in circulation are lost and that 72% of the quarters in circulation are processed by the Fed each year. The present value of the savings from reduced processing of quarters is

³ This estimate is in keeping with the coin loss figures from Ephraim Goldin, Statistical Analysis of Coins Lost in Circulation, *Journal of Business & Economic Statistics*, January 1985, Vol 3, No 1..

\$28.77 millions (at 2%) or \$15.87 millions (at 5%).

4. Seigniorage

Seigniorage is the difference between the face value of a coin and its cost of production. The U.S. Treasury cannot apply seigniorage to current expenditures but only to reduce the need to borrow for the public debt. Gains from seigniorage are therefore the reduction in interest that the government pays from this reduction in its debt. Although the accounting methods are different, the seigniorage gain for the government is the same (ignoring production costs) whether it issues currency⁴ or coin. When the Treasury mints coins it grants itself seigniorage (which is applied against the federal debt) equal to the value of the coin minus its production costs.

If the Federal Reserve System purchases government bonds, it then owns the bonds and collects the interest that the government pays.⁵ Although it is not under a legal obligation to do so, the Federal Reserve System has always returned to the Treasury all interest payments from the federal debt that it owns that are in excess of its operating cost. Aside from the cost of producing the bills, there are few additional expenses incurred by the Fed in the purchase of government bonds. So the Fed's income goes up by exactly the interest paid on the bonds it purchases with new money. If it incurs no expenses, then it returns exactly this much to the Treasury.

We have already evaluated the costs of physically issuing the dollar bills versus the appropriate amount of dollar coins. The savings from the production of coins are a net savings to the government relative to the cost it would have incurred producing the bills. Since these costs have already been accounted for in comparing bills to coins, they need not be accounted for again in calculating seigniorage.

Mainly because of the way consumers handle coins and because coins tend to become stockpiled in machines the quantity of one dollar coins that would be in circulation is greater than the quantity of one dollar bills. These additional coins generate additional seigniorage. Using the same assumptions as we used for the production section and using the interest rate on 12 month government bills (5.36%, the lowest interest rate the government is currently paying and therefore giving us the most conservative estimate of the gains being made) as the relevant interest rate we calculate that, over the next thirty years the additional coin circulation produces interest avoided through seigniorage with a present value of \$15.523 billions (at a 2% discount rate) or \$9.873 billions (at 5%). In the first year of issue, the interest avoided from seigniorage is \$352.269 millions.

The experience of Australia, Britain, and Canada suggest that additional gains will occur because the entire stock of outstanding one dollar bills will not be returned to the government. One also notes from the experience

⁴ The gains from converting government debt into money (or currency) through the central bank (the Federal Reserve System) are really seigniorage although the standard governmental terminology is portfolio earning.

⁵ The Federal Reserve purchases government bonds with credits to the banking system. When they need currency, banks exchange these credits for Federal Reserve notes.

of these countries that the percentage of the stock of one dollar bills that is not returned varies with the purchasing power of the bill. Table 1 illustrates the relationship between the value of the bill and the quantity returned.

Table 1

Country	Date of Redemption	Percent not redeemed	Value of bill (in U.S.\$, 1985)
Australia	1984	46.74 (by 1989)	\$0.854
Britain	1983	15.91 (by 1989)	\$1.552
Canada	1987	50.89 (by 1991)	\$0.731

At the current rate of inflation, the U.S. dollar will be worth \$0.78 of 1985 dollars in 1993. If that is the date of redemption of the bills, the relation suggested above indicates that we could expect only 52¢ of the 3.65 billion outstanding bills to be redeemed or 48¢ will not be returned to the government) These unredeemed bills represent an additional \$1.752 billions in government debt that does not pay interest. At the interest rate of 5.36%, this represents an annual savings of \$93.93 millions. The present value of this savings over thirty years is \$2.145 billions (at 2% discount) or \$1.516 billions (at 5%).

One last item with respect to seigniorage. There currently exists, stored in warehouses a substantial number Susan B. Anthony dollars for which the Treasury has claimed seigniorage. Aside from the economic question as to whether it is reasonable to claim seigniorage on coins a government mints and stores (following this logic one could eliminate the federal debt by minting and storing enough coins) there is the question of what to do with these coins. If these coins are destroyed, as has been suggested in some legislation, this would entail a cost of approximately \$8 millions to melt down the coins and a seigniorage loss of 415 millions (according to GAO testimony) The metal from these coins can be used to produce other clad coins and their scrap value (of at least \$24 millions) greatly exceeds the meltdown costs. Since the fate of these coins is not determined, we assume that they will remain in storage and their seigniorage will continue to be counted.

5. Total governmental savings

The calculation of the present value of the total savings of the government can be seen in Table 2. Using a real discount rate of 2%, the savings over thirty years has a present value of \$22.4729 billions. Using the real discount rate of 5%, the savings over thirty years has a present value of \$15.6688 billions.

In order to interpret these present values of savings we can calculate the constant amount of savings that would result in each of these present values at the appropriate discount rate. Constant annual savings of \$886.34 millions would give a present value of \$20.2479 billions if discounted at 2% and constant annual savings of \$862.76 millions would give a present value of \$13.9258 billions if discounted at 5%. These numbers are what we could

compare to the estimated savings given in the GAO report of \$318 millions.

Table 2

Source	Present value of savings (in millions)	
	at 2% discount rate	at 5% discount rate
Direct cost of production of one dollar unit	\$ 2631	\$ 1463
Increased cost of notes	\$ -221.5	\$ -213.3
Reduced production of quarters	\$ 612.6	\$ 361.9
Processing savings for Federal Reserve on dollar	\$ 1429	\$ 909.4
Processing savings on quarter	\$ 28.8	\$ 15.8
Interest savings from seigniorage on coins	\$15523	\$ 9873
Interest savings from portfolio earnings on unredeemed notes	\$ 2145	\$ 1516
TOTAL	<u>\$20247.9</u>	<u>\$13925.8</u>

6. Mass Transit

As of 1988, the average fare in the U.S. mass transit system was 66.2 cents, an increase of 100% over the average fare of 1979. At the current rate of inflation (5%) the average fare of all transit systems will pass one dollar by 1997. Actual fares in 1988 ranged from a high of \$2.75 to a low of free and most of the larger ones (New York, Los Angeles, Chicago, and Washington) are already over one dollar. With continuing inflation, the average fare approaches one dollar and more and more transit systems have fares of one dollar or more. Once the fare reaches one dollar dollar bills enter the system in large numbers (systems that allow change or sell tokens handle bills much earlier) and the transit system faces increased costs from handling bills. Some systems for example, New York City) currently do not allow bills to be used on buses. However as inflation drives up the fare, these systems will face increased pressures to accept bills. The Chicago Transit Authority (which has already purchased its equipment to handle bills) estimates the costs of processing bills, manually, at \$22 per thousand compared to the costs of processing coins, mechanically, at \$1.64 per thousand. In addition, equipping the buses in Chicago with bill feeders cost \$1800 per vehicle. These bill feeders do not keep the bills in stacks, but do keep them flat and reduce tearing. Sorting costs, if the bills are inserted in a traditional fare box, are even higher because bills need to be

unfolded before being stacked. Approximately one-third of Chicago's fare revenues are in bills. We assume that expenses for other transit systems are similar. But that the current national average of fare revenues in bills is only 20%. This percentage is assumed to increase by one percent a year (actually a very low estimate) over the next thirty years if a one dollar coin is not introduced.

The total revenue of the national transit system in 1989 was \$5,468.0 millions. We assume a 5% rate of growth of revenues (less than the experience of the past ten years) and a one percent increase each year in the use of bills. Switching to coins would save \$20.36 for every thousand bills that would have been received. The present value of this savings in processing costs over the next thirty years is \$2,497 millions (at a 2% discount rate) or \$1 505 millions (at 5%). Additional savings will occur because the installation of bill feeders (accepters) can be delayed. The Southern California Rapid Transit District estimates that it can save annually \$500 000 in maintenance on bill accepters and half the capital costs of purchasing fare boxes or \$750,000. These numbers are to be compared to the \$3 25 millions it would save in dollar processing costs. For this transit district, other savings equal approximately one-third of the savings in bill processing. If this ratio persists throughout the country, then an additional savings with a present value of \$832 millions (at 2%) or \$502 millions (at 5%) would occur from reduced expenditure on and maintenance of bill accepters. The present value of total savings to the transit industry from the introduction of a one dollar coin are \$3.329 billions (at 2%) or \$2.007 billions (at 5%). These present values are equivalent to constant annual savings of \$145.7 millions (at 2%) or \$124.3 millions (at 5%).

There is another, more difficult to quantify, welfare consideration of the one dollar coin. A number of transit systems sell packages of tokens at a discount to the regular fare because handling the tokens is considerably cheaper than handling money. In Chicago for example, the CTA sells ten tokens for \$9 while the regular fare is \$1 25. Those who ride the CTA frequently and can afford to purchase ten fares at once pay a price of \$.90 a ride. The very poorest of frequent users (those who have difficulty in taking \$9 from their daily budget) end up paying a higher cost than the more affluent who can afford the tokens. A dollar coin would reduce the handling cost and the rational for the fare differential. This should lower the fare for the non-token users.

7. Vending and amusement machines

The introduction of a one dollar coin should reduce expenses for vending machines operators. The sources of these savings come from several sources. First, there will be lower processing costs with coins. Second it is considerably cheaper to install an additional slot and change tube for a one dollar coin than it is to install a bill validator. A large portion of the machines in service already can accept the Susan B. Anthony dollar. Third,

⁶ In countries with very high inflation rates (for example, Argentina in 1985) no coins are in use and 100 percent of transit fare transactions are in bills. During a visit to Argentina, the author has experienced a fare where a minimum of seven bills (two tens, one five, and four ones) were required to make exact change. Fare processing was extremely slow.

a one dollar coin can be recycled inside the machine as change while, under the current technology, one dollar bills cannot. If the one dollar coins could be used as change, larger bills could be accepted in the bill validators. This is particularly important since continuing inflation will drive prices well above one dollar for many items.

The estimation of the cost savings among vending machine operators (which can, at least potentially, be passed on to the consumer) include the following assumptions: 1) Sales in vending machines continue growing at the 6.5% rate that they have been growing over the last ten years. 2) Dollar bills make up approximately 17% of current receipts of vending machines and that this will grow by one percent a year. 3) Processing and transportation costs on notes are \$9.50 per thousand. This is lower than the cost experienced by transit authorities because the notes come better organized. 4) Processing and transport costs on coins are \$2.91 per thousand. We assume that there is no reduction in quarter use in vending machines from the introduction of the dollar coin. With these assumptions, we find that the present value of savings over thirty years from switching to a dollar coin are \$4.785 billions (at 2%) or \$2.796 billions (at 5%). These are savings for an industry that in 1990 did \$25.8 billions of sales.

Bill validators cost between \$350 and \$450 to install in the factory and up to \$600 to retrofit. Adding a one dollar coin to a new machine is very cheap and costs only \$25 in parts and \$50 in labor to retrofit (this is the cost on a soft drink vending machine). Vending machines have a useful life of between 8 and 12 years. One additional generation of machines could go without a bill validator if a dollar coin were introduced. There are currently 3.8 million machines in service. At a cost savings of \$300 per machine for even 75% of the machines the savings on not installing bill validators totals \$855 millions or, spread evenly over ten years, has a present value of \$783.37 millions (at 2%) or \$693.21 (at 5%).

There are currently 2.5 million amusement machines in service. They are still almost strictly coin operated machines using one of two kinds of coin validators. Mechanical validators (on about 80% of the machines) would require a new slot costing \$14-18 dollars each. Electronic validators merely need to be reprogrammed to accept the new coin. Average life of a machine is five years so that the next generation could come with dollar validators from the factory. The main gains from a dollar coin are user convenience and reduced processing and transportation costs. Assuming that on average one-half of the quarters are replaced by dollars, and that coin processing and transportation costs are \$2.91 per thousand, then the present value of the savings over thirty years is \$273.3 millions (at 2%) or \$184.1 millions at (5%).

8. Other coin accepting machines

The continuing declining value of the dollar, and of the highest value common use coin, the quarter will force us to change the way we currently use a number of coin accepting machines. The use of coin operated laundry machines, pay telephones, coin operated newspaper boxes, and parking meters all require the user to carry substantial quantities of coin and, with continuing inflation, will soon require more. The average price of using a coin laundry machine is approaching one dollar and some machines that can clean larger loads already cost three dollars and require twelve quarters to

use. In the larger metropolitan areas, parking meters now require \$1 to \$2 per hour. A number of national newspapers, especially the specialized ones and Sunday editions, now cost a dollar or more.

These increasing prices make it ever more unlikely that individuals will be carrying sufficient coin to make purchases or feed meters conveniently. It is unlikely that we will see bill validators on these machines, mainly because the volume of business is too small to warrant the expense per machine and the machines are in locations without electricity and subject to easy damage. An alternative that has been suggested is to use debit cards for each or all of these types of machines.

The conversion to a debit card would require substantial capital investment, both in equipment and in the organization of the delivery system. Individuals would need to be able to acquire the debit easily and all of the machines would need to be able to accept them. It is not at all clear that the coordination necessary to have a national debit card system is possible and it is even questionable that local debit cards could be organized to work for all the systems mentioned. The machines (parking meters, for example) would need to be connected to electricity or, at least, be powered by battery. The cost of the change in technology from coin operated to debit card operated is extremely difficult to estimate but is likely to be very large.

The main cost of introducing the one dollar coin is converting the current stock of machines to accept that coin. The cost of retrofitting a parking meter to accept a dollar coin the size of a Susan B. Anthony is between \$15 and \$20 or about \$4 millions for the 206,000 parking meters in the twelve largest meter-using cities.

Currently, about ten percent of pay phone coin revenues, or \$300 millions, come from long distance calls. Nonetheless, pay telephone installers have already begun to move away from coin use (both because of the small value of the quarter, the cost of having an operator handle the call, and the damage caused to the phone because of attempted theft). Pay phones that use a mechanical coin validator do not provide enough room for a new one that accepts four coins. Electronic accepters can be converted at a cost of \$150 each. As pay phones wear out (in 5 to 10 years, depending on location), they could be replaced by ones that accept dollar coins at fairly little cost.

Installing a slide to accept dollar coins on laundry machines would cost between \$25 and \$30 for the slide and between \$2 and \$5 for labor. We estimate that there are at least 2.5 million laundry machines in service. Assuming that about half of them are retrofitted and the other half are replaced, as they wear out by a machine that accepts the dollar coin, there is a one time conversion cost of approximately \$39 millions.

While most daily newspapers are currently priced well below one dollar (for example, the daily New York Times is \$.50, the daily Los Angeles Times is \$.35, the Wall Street Journal is \$.75, and USA Today is \$.50) the prices should be reaching a dollar in ten to fifteen years at the current rates of inflation. In addition, Sunday editions, although far fewer are sold from coin vending machines cost more than one dollar for many major newspapers. Current newspaper vending machines do not accept a one dollar coin and they

either will need to be retrofitted or, as they wear out, be replaced by machines that accept coins. Retrofitting is probably prohibitively expensive given the daily revenue from coin boxes while including a dollar slot in new machines is almost costless.

The main source of short term gains from the use of a one dollar coin in parking meters and laundry machines is from reduced processing and transport costs. First, from mere value considerations for every dollar coin that replaces a quarter there would be one fourth as many coins to handle. In actual practice the savings in handling depends on the exact price. For example, a price of \$1.50 requires 6 quarters or one dollar coin and two quarters. In terms of weight \$1000 worth of Susan B. Anthony's weighs 17.85 pounds while the same value of quarter weights 50 pounds. For the same value, the dollar coins require transporting only 35% of the weight of the quarters. One thousand sales at \$1.50 each weighs 75 pounds in quarters and 43 pounds in a combination of one dollar coins and quarters. To calculate the savings in processing costs that would be generated by issuing a one dollar coin, one needs to estimate the distribution of prices and the quantity of coins that would be used to obtain that price with only quarters and with a one dollar coin and quarters. This was done by assuming a 5% per year increase in the average price over the next thirty years and assuming a normal distribution of prices (but limited to prices that were exactly divisible by a quarter). We then calculated the number of quarters that would be needed to meet this distribution and the number of dollar coins and quarters that would alternatively meet this price. The average difference in number and weight of the coins required at each price was used to calculate processing and transportation cost savings. The present value of these savings over the next thirty years for laundry machines comes to \$2.686 billions (at a discount rate of 2% or to 1.684 billions (at 5%). The present value of these savings in processing costs for the cities who have installed parking meters and who currently have a one hour cost of one dollar or more are \$33.166 millions at 2% or 20.794 millions (at 5%). As inflation continues many more cities will be able to make use of the one dollar coin. The savings from these additional cities is not included in the estimate. Additional savings, which are difficult to estimate, would occur in both of these sectors because the smaller number of coins would mean that the coin boxes would not need to be emptied as frequently.

9. Money handling by banks and money transport services

An April, 1990, report of the American Bankers Association enumerates a number of ways that the introduction of a one dollar coin would increase their operations costs. There are a number of minor costs incurred from the change (the one time cost of retrofitting or purchasing new coin sorters for those using machines made before 1980, for example) but the two main sources of the additional costs that the ABA mentions are transport costs and processing costs.

The increased transportation costs occur simply because the coins weigh more than the bills (approximately 17 pounds per thousand for the coins versus approximately three pounds per thousand for the bills). Money transportation companies Brinks and Wells Fargo (for example) and the Federal Reserve system for its transportation services normally charge by the trip (the per trip charge depends on whether the bank is on a regular route and how long the trip is) and each trip allows the transportation of

up to \$500,000 worth of bills or thirty boxes of coins without additional charges. For several sampled companies, there was a charge of \$.60 per box beyond the allowed thirty boxes. We estimate that 1000 coins cost \$1.27 to ship and (given the weight differential between coins and bills) that 1000 bills cost \$ 224 to ship. The present value of the additional transportation costs from shipping one dollar coins to the Federal Reserve Banks over the next thirty years totals \$333 millions (at 2%) or \$211 millions (at 5%).

Processing cost for coins is lower than that for bills. For the Federal Reserve Banks the average activity cost of processing a coin is only eight percent of that of processing a bill (\$.348 per thousand for coins compared to \$4.39 per thousand for bills). If the ratio of processing cost are similar for banks then the gains in processing costs from switching to the dollar coin should be very large for banks. However, while banks and their branches handle much of their cash needs from cash deposits that they process internally, any excess cash goes to the local Federal Reserve Bank and any cash shortage is made up from deliveries from the local Federal Reserve Bank. Federal Reserve Banks charge banks for coin processing (the Cleveland FRB charges \$1.55 per box of 1000 coins) but they do not charge them for bill processing. Some banks purchase their coins from the transportation companies.⁸ It is reported that Brinks charges \$2.10 for a box of 1000 rolled coins. Although the policy varies by bank, these coin charges are often passed through to the retail coin users.

The Federal Reserve Banks are likely to have lower costs in both coin and bill processing than commercial banks. The main reason for this is that the bills arrive at the FRBs already boxed and stacked. The majority of the processing at the FRBs is done by high speed machines. In commercial banks, much more of the money processing is done by hand. Estimates from one major bank are that the initial processing cost of a bundle of 1000 notes is \$.90, the cost of sorting one bundle for tellers is \$8.00 (and while not relevant to one dollar bills it costs an additional \$1.50 to prepare the bundle for an ATM machine). A cost of an additional \$.60 occurs on bundles shipped to branch banks.

There is no data available on the total amount of cash that banks handle in a given year. Much of the cash comes in and leaves at the tellers window and is never counted. Being very conservative we estimate the processing savings of switching to coins by using the quantity of one dollar bills that banks send for processing to the Federal Reserve Banks. This is the minimum amount of currency processing that the banks must be doing. The present value of the savings in processing costs is \$2.65 billions (at 2%) or \$1.69 billions (at 5%).

⁷ Many of the coins processed by the FRB never leave the 1000 coin sack in which they arrive. Some of the processing is done by weight and the coins are never sorted or counted. Counting and sorting all of the coins they receive, which commercial banks must do, would increase the FRB's cost of coin processing.

⁸ This is a good estimate of what it would cost the banks to process coins.

⁹ The number used here are the same as we used for the processing cost savings in the section on the Federal Reserve Banks.

The processing savings from handing coin is quite large. However, the ABA report on the one dollar coin was quite negative. This indicates that the banks believe that they will face increased costs because of the coin. We are at a loss to find those costs. While there are some increased transportation costs these appear to be heavily outweighed by the savings in processing. However, if the banks are able to shift a large percentage of the processing of one dollar bills to the Federal Reserve Banks instead of doing it internally the introduction of a one dollar coin would remove the gains generated by this shift. The Federal Reserve Banks do not charge banks for the processing of notes but they do charge for the processing of coin. The resistance of the ABA to the introduction of a one dollar coin suggests that the gains they are currently receiving from shifting the cost of processing bills to the Federal Reserve System are fairly large. However, this also seems unlikely. The rules on currency and coin shipment to and from the FRBs are such that considerable processing is required before the bills go to the Reserve Bank. In addition, FRB regulations prevent banks from sending and receiving good bills in the same week. Banks can send unwrapped coins and get wrapped coins back, but they are charged \$ 0375 per roll as a wrapping charge and pay shipping charges. They must also send an additional thirty bags of coins to the FRB a week if they wish to avoid an additional charge. In sum, while there are possibilities for a bank to use the FRB to clear out unfit bills from its stock of currency, there does not seem to be very large cost savings available from this activity.

10. Consumers

Part of the savings to consumers is quite simple to calculate. Any gains to the rest of the economy eventually gets passed on to consumers as reduced costs (from the vending industry, for example reduced taxes (from government savings or as increased value of assets (from increased profits caused by the savings). The sum of all of the gains mentioned earlier go to consumers eventually. Since the savings or costs from the other sectors are already counted there, we cannot count them again as accruing to consumers. Doing so would double count them.

Other gains and costs to consumers are more difficult to measure. The University of Michigan 1979 report on the acceptance of a one dollar coin reported that men were quite negative about the coin. Mainly, they preferred carrying a bill rather than the heavier coin. The survey reported that men tended to dump the coins from their pockets in the evening. Their survey of women was much less negative. That survey indicated that women tend to carry much more coin than do men and that the smaller one dollar coin was preferred to four quarters.

The poor and individuals without access to credit will benefit from a one dollar coin. Pay telephones, coin laundry machines, and public transportation are examples of some of the industries that are particularly useful to these individuals. The absence of a larger denomination coin makes the use of pay phones and laundry machines more difficult for them to use. In some major cities, those who purchase transportation tokens in larger quantities receive discounts. These discounts force those who cannot afford to buy larger quantities to pay higher prices for the transport services. A larger denomination coin could permit the reduction of the cost of the service to these poor.

The visually impaired would gain from the switch to a one dollar coin. If sufficiently distinctive so as not to be confused with the quarter, it would be easy to identify. Visually impaired merchants have difficulties in identifying notes and face a greater danger of being offered and accepting crude counterfeits than do other merchants. A one dollar coin reduces these risks.

That a one dollar coin could have some kind of psychological effect to generate additional inflation seems farfetched. The need for a dollar coin is a reflection of the inflation that has already occurred and it is a continuing inflation which will make that need greater. If there were something special about a price of one dollar, such that sellers would round their prices to this amount, this rounding would already be occurring in vending machines that have bill validators. The distribution of prices in these machines does not suggest that prices are commonly rounded up to one dollar.

11. Total private savings

The calculation of the present value of total private savings can be seen in Table 3. Using a real discount rate of 2%, the savings over thirty years has a present value of \$14.2065 billions. Using a real discount rate of 5%, the present value of savings over thirty years is \$8.8639 billions. These present values are equivalent to a constant annual savings of \$621.9 millions (using the 2% estimate) or \$549.15 millions (using the 5% estimate).

Table 3

Source	Present value of savings (in millions)	
	at 2% discount rate	at 5% discount rate
Transit		
Processing costs	\$ 2497	\$ 1505
Delay in converting fare boxes	\$ 832	\$ 502
Vending machines		
Processing and transport	\$ 4785	\$ 2796
Validator delay	\$ 783	\$ 693
Amusement machines	\$ 273.3	\$ 184.1
Laundry machines	\$ 2686	\$ 1684
Parking meters	\$ 33.2	\$ 20.8
Banks		
Processing costs	\$ 2650	\$ 1690
Transport costs	\$ -333	\$ -211
TOTAL	<u>\$14206.5</u>	<u>\$ 8863.9</u>

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Actual and Projected Coin Production

adjusted for inflation

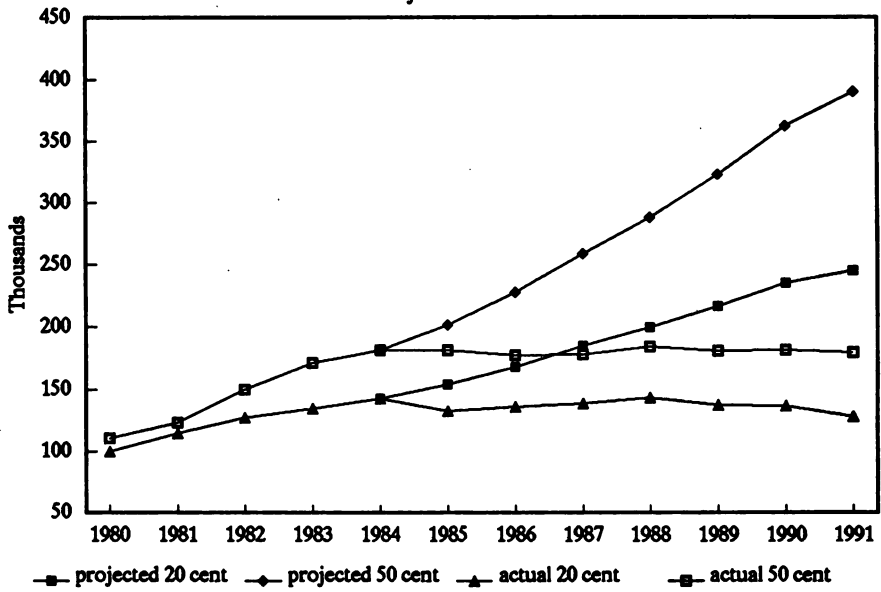


FIGURE 1

Chairman KILDEE. Thank you very much. You answered partially one of my questions in your last statement there.

There is a vote on in the House, so I think before we—what we may do rather than interrupt your testimony, Mr. Schatz, is to—we will go over. It will take us about 10 minutes to cast our vote, and then we will come back and cover your testimony.

[Recess.]

Chairman KILDEE. We have cast our ballots, so now we are back. Mr. Schatz, Senior Vice President, Citizens Against Government Waste.

Mr. SCHATZ. Thank you, Mr. Chairman. Thank you. I appreciate the opportunity to testify today.

As the acting president of the 450,000 member Council for Citizens Against Government Waste, the leading citizens' organization on the Dollar Coin Act, I am pleased to appear before you in support of H.R. 1245, the One Dollar Coin Act of 1991. Seldom does Congress have the opportunity to reduce government waste while helping the private sector at the same time. The One Dollar Coin Act of 1991 would do just that by replacing the \$1 bill with a \$1 coin.

We have heard various estimates of what this would save for both the Government and the private sector—\$218 million a year from GAO; the Federal Reserve says either \$395 or \$511 million; and Mr. McCandless, \$862 million. Aside from the fact that it is likely none of these will be the precise number, because estimates are never 100 percent accurate, the fact is, significant savings in the hundreds of millions of dollars can be achieved; and that is certainly worth pursuing, while also pursuing a balanced budget amendment, as Mr. Kolbe pointed out.

I noted that Mr. Houghton was here, and unfortunately he departed. But as a member of the Grace Commission and as a former chairman of a large corporation, I know that he recognizes that any reasonable effort to increase efficiency and improve the practices of the Federal Government should be enacted; and as a cosponsor, I am sure he is in continuous support of this legislation.

Chairman KILDEE. Yes. Mr. Houghton was called to another meeting. He is going to try to get back.

Mr. SCHATZ. I understand.

I also note Mr. Pease, who was one of the sponsors of some of the original legislation to implement Grace Commission recommendations, should also view this as something to increase the efficiency of the Federal Government.

Now, the savings again, whatever they might be, come from the fact that \$1 bills last about 17 months and are reprinted at a cost of 3.5 cents each. A \$1 coin lasts 30 years, but only costs 6 cents to mint. So a coin does the job of 21 bills.

All major western countries have high denomination coins, most of which have been issued since 1980. The Susan B. Anthony dollar seems to be the major culprit as to why the U.S. has not adopted a \$1 coin. But since every country that has introduced a \$1 coin has removed the equivalent note, that is something the United States should do as well.

In most countries, the exchange was initially unpopular with the public, but resistance quickly dropped once the convenience of a

high-value coin is rediscovered. And as to forcing the American people to accept a \$1 coin, it seems to me over the years Congress and the executive branch have forced the American people to accept far more offensive things in their daily lives than the \$1 coin.

How many people have fumbled for a paper dollar to pay a toll? I had this problem just coming back from New York over the weekend. It seems to me it would be much more convenient to have a \$1 coin, reach into your pocket, into a shirt, into a jacket, toss it into an automatic toll machine instead of waiting for change of a 5 or a 10, or calculating how many \$1 bills do I need. A couple of \$1 coins would solve that problem, and again the American people would quickly discover the convenience of having that \$1 coin.

Chairman KILDEE. I get a sense of rejection when I use the subway system, trying to put my \$1 through, and it keeps spitting out at me and people keep looking at me suspiciously and wonder where I printed that \$1.

Mr. SCHATZ. You took the words out of my mouth, Mr. Chairman. I was also going to mention the Metro.

At a time when the deficit is running \$400 billion a year, whatever the number again—\$200 million, \$800 million, a billion—the fact is, it is still real money. We have seen metaphors on what a billion dollars equals, and let's just use that for this purpose.

In 1990, 95 million personal tax returns were filed with a total liability of \$471 dollars. That is the equivalent of almost \$1 billion per congressional district.

Let me say that in another way. If these taxes were divided equally among the congressional districts, the personal taxes paid by the taxpayers of one congressional district would nearly equal what everyone would save with a \$1 coin. In fact, in 1990, four States contributed less than a billion dollars in personal income tax to the Federal Treasury—Vermont, \$791 million; Wyoming, \$866 million; North Dakota, \$917 million; and South Dakota, \$971 million.

There is another way to view these savings. One billion dollars equals \$1,000 in tax relief for one million American families. Surely, this is worth pursuing.

The Council for Citizens Against Government Waste is working in support of a balanced budget tax limitation amendment. H.R. 1245 will clearly help move Congress in the direction of balancing the budget on the side of reducing nonessential spending.

There is a large coalition behind this bill; there are over 230 cosponsors in the House. And it seems to me that the time has come to act on this legislation, and we hope that you can convince your colleagues on the Banking Committee to move ahead on H.R. 1245 and enact this bill this year.

Thank you, Mr. Chairman. I ask that my full statement be entered into the record, and I would be pleased to answer any questions you may have.

[The prepared statement of Thomas A. Schatz follows:]

STATEMENT OF THOMAS A. SCHATZ, ESQ.
ACTING PRESIDENT
COUNCIL FOR CITIZENS AGAINST GOVERNMENT WASTE

Mr. Chairman, thank you for the opportunity to testify today. As the Acting President of the 450,000-member Council for Citizens Against Government Waste (CCAGW), I am pleased to appear before you in support of H.R. 1245, The One Dollar Coin Act of 1991.

Seldom does Congress have the opportunity to reduce government waste while helping the private sector at the same time. The One Dollar Coin Act of 1991 would do just that by replacing the dollar bill with a dollar coin. In fact, both the government and private businesses could cut their costs by nearly \$1 billion annually by switching to a dollar coin.

These savings come from the fact that dollar bills last about 17 months and are reprinted at a cost of 3.5 cents each. A dollar coin lasts 30 years, but only costs 6 cents to mint. Thus, a coin does the job of 21 bills. The government would save more than \$862 million annually if this change is made, according to the study by the University of Chicago economist George McCandless.

Because coins are easier to count than bills, which must be straightened out by hand, the mass transit industry would save more than \$124 million annually, according to Mr. McCandless. The Chicago Transit Authority and the Southern California Rapid Transit District each process close to 300,000 dollar bills daily at a total annual cost of almost \$7 million. Certainly there are better ways to spend scarce mass transit resources than flattening dollar bills!

All major western countries have high-denomination coins, most of which have been issued since 1980. Why hasn't the United States made the switch? Answer: The Susan B. Anthony dollar.

Failure to remove the one dollar bill is the single biggest reason the Anthony dollar failed; the fact that it was easily confused with the quarter didn't help matters.

Every country that has introduced a dollar coin has removed the equivalent note. In most countries, the change was initially unpopular with the public, but resistance quickly dropped once the convenience of a high-value coin is rediscovered.

How many of you have fumbled for paper dollars to pay tolls?

How much more convenient would it be to just toss a coin or two into an automatic toll machine than to hand off paper dollars and wait for change for a five or a ten? Today's dollar is the quarter of the 1960's, with the Consumer Price Index having risen from 29.9 in 1961 to 136.6 in 1991.

For those who prefer paper bills to coins (most American, according to polls), there is the two dollar bill. The reason it doesn't circulate has less to do with bad luck and horse racing than with the design of cash register drawers. Once the dollar bill is removed, there will be an empty slot for the two dollar bill.

At a time when the deficits is running \$400 billion a year, a mere \$1 billion barely merits an asterisk in OMB's budget projection. We have all seen metaphors on what a billion dollars equals. I would like to present yet another.

In 1990, 95 million personal tax returns were filed with a total liability of \$471 billion. That's the equivalent of almost \$1 billion per congressional district! Let me state that again. If these taxes were divided equally, the personal taxes reported on Form 1040 by the taxpayers in one congressional district would nearly equal what the public sector would save with a \$1 coin.

In fact, in 1990 four states contributed less than \$1 billion in personal taxes to the Federal Treasury.

Vermont:	\$791 million
Wyoming:	\$866 million
North Dakota:	\$917 million
South Dakota:	\$971 million

There's another way to view these savings -- one billion dollars equals \$1,000 in tax relief for one million American families. Surely, this is worth pursuing.

To paraphrase Edmund Burke, the noted English economist and Member of Parliament, "there is no greater tragedy than the man who did nothing because he thought he could only do a little."

That thought can be turned into a question. If Congress and the American people are reluctant to take the small, easy savings, how can we possibly hope to combat the nation's deficit dilemma?

The Council for Citizens Against Government Waste is now working in support of the balanced budget/tax limitation amendment. H.R. 1245 will help Congress move in the direction of a balanced budget.

Because the U.S. Mint will need almost three years to introduce a \$1 coin, the savings will not be realized for several years. But unlike many budget

decisions, the savings from a \$1 coin will continue to increase each year, so that our children and grandchildren will be the largest beneficiaries of a \$1 coin. That is why Congress must not delay in passing this legislation.

CCAGW is already in the process of building grassroots support for the One Dollar Coin Act. Through our Taxpayer's Action Network (TAN), located all across the nation, we plan to raise public recognition of the One Dollar Coin Act. We will educate our activists as to the benefits of the one dollar coin -- to their pocketbooks as taxpayers, and to their interests as consumers and business people.

CCAGW also works closely with 192-member, bi-partisan Congressional Grace Caucus, chaired by Sens. Hank Brown (R-CO) and Herb Kohl (D-WI) in the Senate and Reps. Chris Cox (R-CA) and Frank Pallone (D-NJ) in the House. We will urge the Caucus to act in support of H.R. 1245, as well as generate interest among the Coalition for Fiscal Restraint (COFIRE), a group of more than 100 business and taxpayer groups who promote fiscal restraint and responsibility in the congressional budget process.

While many Americans may moan at the initial hassle of switching to the dollar coin, we cannot ignore any opportunity to achieve government budget savings and improve the private sector's bottom line.

I hope that the members of the Budget Committee will encourage their colleagues on the Banking Committee to approve H.R. 1245, so that it can be enacted during the 102nd Congress.

Mr. Chairman, this concludes my statement regarding H.R. 1245, and I would be happy to answer any questions.

Chairman KILDEE. Thank you, Mr. Schatz. And this record will be printed and made available to the other committees of the Congress, and that is one of the reasons that we are having the hearing.

Mr. Benfield.

Mr. BENFIELD. Thank you, Mr. Chairman. My name is Jim Benfield. I am a partner with the firm of Bracy Williams and Company and Executive Director of The Coin Coalition, a group of 29 associations, transit authorities, and companies that support the One Dollar Coin Act.

I know that the focus of this hearing is on governmental savings, and The Coin Coalition represents primarily the private sector. But the savings of a \$1 coin accrue to the public and private sectors for exactly the same reason.

In large quantities, paper is difficult to handle; coins are easy. I brought with me two photographs. This is the cash room of the Chicago Transit Authority. Here is a second photo. There are 30 individuals pictured here. They do nothing 8 hours a day, but straighten and stack \$1 bills. They are not even counting them. They are just facing them and stacking them. The Chicago Transit Authority spends \$2 million a year with this type of exercise.

Professor McCandless has estimated that mass transit nationwide spends \$124 million a year just straightening \$1 bills. I talked to the Washington Metro, their operations people; I said, gee, with a \$1 coin, even though you have bill acceptors on your fare card machines, you could use them more quickly, because you won't have the high rejection rate. So you would have shorter queues.

And they said no, wait a second, not necessarily shorter queues. We wouldn't need as many fare card machines. I said, well, what do those things cost? Fifty thousand dollars apiece. So those are the kind of savings you get into. On processing Washington's Metro, even with their modern system, it would save \$450,000 a year.

Vending has exactly the same problem. Paper is difficult to process. Bill acceptors cost about \$400 apiece on a Coke or Pepsi machine, or an amusement game. But a factory-equipped \$1 coin mechanism would cost only about \$40. There is also a simple environmental analysis. These terms are becoming new. This [holding a \$1 bill] is a disposable; this [holding a coin] is a reusable. And everybody knows that reusables are better than disposables.

Although Professor McCandless estimates that annual average savings would be around \$862 million, we think it is appropriate to round that up to a billion dollars. Why? Because if the coin-operated industry is allowed to operate more efficiently, one presumes their profits will be greater, and that means more taxes will be paid. That is very difficult to quantify, but I don't think anybody could argue with that. If that were not true, the alternative is that the market pressures would force vendors to either lower prices or to forego future price increases. The \$124 million that mass transit would save, I think should also be factored into the savings. They are quasi-governmental.

As you can see in my prepared statement, every Western economic power has made the change to high-denomination coins. The reasons are familiar. Let me read a couple sentences from a recent press release of the Swedish Central Bank: The 10-Krona note is no

longer of sufficient value to demand careful handling, and has come to be regarded as small change and is handled accordingly. This reduces its circulation level. Although it costs less to print a note, a coin lasts considerably longer and entails an eventual savings.

So whether you read this in Swedish—I can show you newspaper articles in Singapore—it is the same in every country. Paper is difficult to handle.

Finally, I want to show you—my wife asked last night, Jim, are you bringing your walnut shells with you? And in The Coin Coalition, we call this the shell game. Sometimes people say, wait, would you do that again; I didn't quite follow. But here is how it goes.

Every cash transaction that you make entails a lot of \$1 bills, something either requires one or two bills. If something costs \$38, you are going to handle two or three; if something costs \$1, you are going to handle one or four. You may get lucky and not require any \$1 bills at all, something divisible by five. So you need a lot of \$1 bills.

Under our system, if something cost \$1, you would use a coin. If something cost \$2, you use a \$2 bill. Or if you are at a downtown parking meter, instead of these 8 quarters, you are going to use two \$1 coins. We think the public will find that convenient. If something costs \$3, then use a \$1 coin with a \$2 bill. If something cost \$4, then two \$2 bills.

Also, looking at the governmental savings aspect, here are two \$2 bills at 3.5 cents apiece, here is [holding 4 \$1 bills] 14 cents worth of printing; we are going to cut that cost in half. Here is over 30 cents worth of minting costs [holding 8 quarters]. We are going to cut that down to 12 cents. So you save a lot of money in quarter production, a lot of money in printing expense. And most importantly, you don't see a lot of \$1 coins here. Instead of 10, you are going to see two.

So the public does have an option. We are not forcing coins on them. They can carry a \$2 bill, and we expect—not that we advocate it, but we expect that we could not prevent it from circulating if we wanted to.

Now, one other consideration here is that the United States Mint has said they need 30 months to design a coin. That is 30 months to design, test the dies, and build a starting inventory. Therefore, the potential savings cannot begin until at least 1996. Therefore, if Congress and the administration are serious about the budget deficit and the balanced budget amendment, we must pass this legislation sooner, rather than later.

Thank you very much.

[The prepared statement of James C. Benfield follows:]

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Copper and Brass
Fabricators Council
Copper Development Assn.
International Association
of Amusement Parks
& Attractions
Multi-housing Laundry Assn.
National Association of
Concessionaires
National Association of
Convenience Stores
National Automatic
Merchandising Association
National Campground
Owners Association
National Coffee
Service Association
National Confectioners
Association
National Council of
Chain Restaurants
National Parking Assn.
National Soft Drink Assn.
Public Telephone Council
RP Foundation
Fighting Blindness
Randolph-Sheppard
Vendors of America
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The Seniors Coalition
Smarte Carte Inc.
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Statement of James C. Benfield, Executive Director THE COIN COALITION

Before The
House Budget Task Force on
Economic Policy, Projections and Revenues
on the
"One Dollar Coin Act of 1991" (H.R. 1245)
May 28, 1992

Introduction

The Coin Coalition, a group of 29 associations, transit authorities, and companies, strongly supports the One Dollar Coin Act of 1991 (H.R. 1245).

The United States currency system, fundamentally unaltered during this century, is in desperate need of modernization -- specifically, a circulating dollar coin.

With paper bills, we cannot make a long-distance call on a pay phone, buy a Sunday paper from a street box, drive through a toll booth, or use a long-term parking meter. We wait as subway fare machines reject, then slowly accept bills. A well-designed \$1 coin would reduce government spending, eliminate the need for costly mass transit fare-box conversions, and hold down the cost of vending machine products, but it also would remove various hidden costs of the outmoded \$1 bill. A \$1 coin would eliminate numerous inconveniences for all Americans.

Because of inflation, today's dollar has the purchasing value of what a quarter bought in the 1960s.

Summary

* Government saves over \$862 million annually. Coins last 30 years; cost 6¢. Bills last 17 months; cost 3¢. Therefore, 21 bills are needed to do the job of one coin.

* Mass transit saves \$124 million annually. Bills cost up to 3¢ each to count. Los Angeles and Chicago systems count 300,000 bills daily. LA and Chicago combined would save almost \$7 million annually. Coins would create faster moving lines at farecard machines.

* Visually impaired would be able to make small purchases conveniently as \$1 coin would be easily distinguishable from other coins.

* Vendors save money because bill acceptors cost hundreds of dollars and slow transaction time for customers.

* Public will have the option of carrying \$2 bills.

All industrialized countries have successfully introduced high-denomination coins and eliminated equivalent paper note. The United States now has coins with the least purchasing power of any major country.

A new \$1 coin should be golden in color; have smooth edges and surface features to aid the visually impaired; have the same dimensions as the Anthony dollar. Most mass transit fare boxes, vending machines, and coin counting equipment are ready for an Anthony-sized coin. Changing dimensions would require retrofitting these machines. The Canadian "loon" \$1 coin, which has replaced Canada's \$1 bill, is an excellent prototype.

I. Government Would Save at Least \$862 Million Annually.

Over the past decade, four different estimates on governmental savings from a \$1 coin have been made:

- 1) \$50 million (present value dollars). In 1979, William Wallace of the Federal Reserve outlined a simple methodology in testimony before the House Banking Committee. The analysis considered only the cost and life of a coin versus a paper note. Interest avoided through seigniorage, portfolio earnings on keepsake notes, etc. were not factored into the calculation.
- 2) \$318 million (present value dollars). In May, 1990, the General Accounting Office estimated that the federal government annually would save \$318 million, on average over 30 years. In the opinion of the Coin Coalition, the GAO made three major errors: assumed a 100% return rate for outstanding \$1 notes, used 2 0% to calculate interest avoided through seigniorage and understated production savings. There errors resulted in a gross understatement of savings.
- 3) \$862 million (present value dollars). In October, 1991, University of Chicago Prof. George T. McCandless estimated that savings to the federal government would be between \$862 and \$886 million, on average, over 30 years. Because McCandless reexamined the assumptions used in the GAO study, we believe his estimate to be more accurate.
- 4) \$224 million (cash flow dollars). In November, 1991, the Congressional Budget Office estimated that during the second year after the coin's introduction, savings would be \$224 million. The GAO also prepared an annual savings estimate in cash flow dollars. A comparison of the first five years after the \$1 coin's introduction follows.

Year	GAO (Present Value)	GAO (Cash Flow)	CBO (Cash Flow)
1	\$ (79.9) million	\$ (4.8) million	\$ 69 million
2	13.2	84.1	224
3	68.4	180.6	
4	119.4	278.3	
5	166.2	377.1	

The Coin Coalition agrees with the GAO that "using cash flow dollars . . . overstate future values by making them equivalent to current values." That is why the Coalition uses the "present value dollar" estimate of Prof. McCandless.

However, in making near-term projections, using cash flow dollars is more appropriate. The CBO uses only cash flow dollars for near-term estimates.

Even though the CBO and McCandless studies were done independently of each other, both are approximately 2.7 times the GAO estimate.

II. Foreign High-Denomination Coins Successful

All of the major industrialized countries, except the United States, have adjusted their coinage systems for inflation by replacing low-denomination bills. Most countries have made these changes since 1980.

In every case, the bill of the same denomination has been phased out of circulation.

Initially the coins were not popular in most countries, but the public soon discovered the convenience of the new coin, and no country has found it necessary to return to paper. The United

States is the only country to have failed with a high-denomination coin -- the Susan B. Anthony. Most experts agree that not removing the \$1 dollar bill was the primary reason for the failure (H.R. 1245 requires the phased removal of the \$1 note. The Coin Coalition would urge the veto of any dollar coin legislation that did not contain this provision.)

The Canadian Experience. Canada introduced its golden colored \$1 coin (called the "loon" on July 1, 1987. The last \$1 notes were printed on April 30, 1989, the last notes were issued on June 30, 1989. The removal of most circulating \$1 notes was completed by December, 1989. Approximately 49% of Canadian notes are being held as keepsakes by the Canadian public.

Rep. Esteban Torres, Chairman of the House Banking Subcommittee on Consumer Affairs and Coinage, requested on March 20, 1992 a study from the General Accounting Office "on the Canadian experience with the dollar coin and elimination of its paper dollar." The GAO was asked to "prepare testimony to be delivered before the subcommittee this fall."

The Coin Coalition has had extensive conversations with officials of the Royal Canadian Mint, Canadian mass transit officials, and owners of vending operations. From these contacts, it is our belief that the Canadian "loon" has been an unqualified success.

Because Canada's coins are similar in size, appearance and purchasing power of U.S. coins, the Canadian experience provides the best model in the world.

Other countries that have successfully put a high-denomination coin into circulation:

<u>Country</u>	<u>Coin (no paper equivalent)</u>	<u>U.S. dollar equivalent</u>
Spain	500*/200-peseta	\$4.98/\$1.99
Japan	500*/100-yen	\$3.85/\$0.77
Switzerland	5/2 Swiss francs	\$3.38/\$1.35
Denmark	20*/10-kroner	\$3.21/\$1.61
Germany	5/2 Deutsche Mark	\$3.11/\$1.24
Netherlands	5*/2.5-guilder	\$2.76/\$1.38
France	10/5-franc	\$1.85/\$0.92
United Kingdom	1-pound*	\$1.82
Sweden	10*/5-kroner*	\$1.73/\$0.86
Ireland	1-pound (Punt)*	\$1.66
Mexico	5000-peso*	\$1.62
Australia	2-dollar*/1-dollar	\$1.51/\$0.76
Norway	10*/5-krone	\$1.59/\$0.80
Finland	5-markka	\$1.15
Canada	1-dollar*	\$0.83
Singapore	1-dollar*	\$0.61
Italy	500-lira*	\$0.41
United States	quarter dollar	\$0.25

*issued since 1980

(exchange rates as of 5/13/92)

III. Other Governmental Savings.

Mass Transit. Because every public transit system in the United States receives governmental subsidies (federal, state and local), federal tax payers have an interest in knowing that their money is being used efficiently.

Processing \$1 coins instead of \$1 bills would save the mass transit industry over \$124 million annually in equipment purchases, maintenance, and processing of \$1 bills, according to Prof. McCandless. Bus and rail systems, large and small, are affected by the inefficiency of \$1 bills.

According to William C. Beutow, Vice President Finance/Treasurer, Chicago Transit Authority, "Bills are counted at a cost of \$22 per thousand. Coins can be counted for \$1.64 per thousand coins."

Thomas Rubin, Controller-Treasurer of the Southern California Rapid Transit District, testified on November 6 before the House Subcommittee on Consumer Affairs and Coinage that the \$2 million in \$1 bills received weekly by the SCRTD are sold to a cash counting contractor at a little less than \$ 98 on the dollar. A \$1 coin would save \$3.5 million. This money could be used to provide additional transit services and would generate an additional \$2 5 million in farebox revenues from new passengers. Elimination of the \$1 bill would eventually result in a reduction of about 50 positions (10 SCRTD; 40 private). However, the new transit services would require hiring 60 additional bus operators, mechanics, service attendants, and first line management positions -- a net gain in total positions.

Vending. The forced use of bill acceptors due to the failure of the Anthony dollar to circulate has added major cost (approx. \$400) to each vending machine so equipped. The increased equipment investment, maintenance costs, and customer transaction times, combined with the absence of adequately valued coins have further reduced the already marginal profits for most vending businesses. The cash room efficiency also will be increased because coins are easier to count. As with the mass transit industry, coins are a deterrent to theft, compared to paper bills.

If a circulating \$1 coin increases the efficiency and profit margins for coin-operated businesses, then three results are possible:

- 1) Private sector businesses will pay increased taxes, because they will realize greater profits.
- 2) Vendors able to operate on the same profit margin will force competitors to lower prices to consumers.
- 3) The need for future price increases will be reduced.

Prof. McCandless estimates that annual savings to the private sector (including local governments) are at least \$549 million.

Savings that might accrue to the Federal treasury in the form of increased tax revenues or decreased expenditures is hard to quantify. Yet, combined with the \$862 million already projected, the Coin Coalition feels that the total benefit to the federal treasury could exceed \$1 billion annually.

Note: An extended statement of the Coin Coalition that focuses on the private sector needs for a \$1 coin is found in the November 6, 1991 hearing record of the Subcommittee on Consumer Affairs and Coinage, Serial No. 102-81, beginning on page 242. This statement also is available from the Coin Coalition.

Chairman KILDEE. Thank you very much.

We appreciate the panel. I have some formal questions. Let me ask a few informal ones first.

In retiring the \$1 bill—and all of you would agree that if we were to go into the \$1 coinage, that retirement of the \$1 bill, paper dollar, would be an essential part of that—would they be retired as they wore out in the usual process, or would there be a means of turning those dollars in?

How would you anticipate the Government would handle that?

Mr. ALLISON. Maybe I should respond to that, Mr. Chairman. Bills don't have a very long life, and it is, in particular, shorter than the time in which the Mint would be producing the replacement stock of coins; that is, that would be a several-year period. So the logical thing would be to take \$1 notes out of circulation as they wear out.

Chairman KILDEE. As they wear out.

Mr. ALLISON. That would be the logical and probably the most efficient thing to do.

Chairman KILDEE. That would vary from—some would be near their 17-month life-span at the beginning, and some would be relatively new, so within about 17 months you would have the majority of them retired in some way then, right?

Mr. ALLISON. Well, that would depend—

Chairman KILDEE. Maybe halfway through that cycle.

Mr. BENFIELD. It can be very sharp. I know in Canada, the \$1 bill remained out there for over 2 years; and then all of a sudden they made an executive decision, so over 2 months they disappeared. So retailers will stay with one standard and then all of a sudden flip on the new standard, because the double standard is very, very time consuming, very inconvenient.

Mr. ALLISON. The timing, I might add, would be driven in very substantial part by the ability of the Mint to produce the replacement stock of coins. That would drive the process.

Mr. KOLBE. Would the gentleman yield?

Chairman KILDEE. Yes.

Mr. KOLBE. That was the question I wanted to ask. Is it realistic to be able to gear up to replace the paper with coins so that the phaseout could be over a 17-, 18-month period? In other words, is it possible to have production sufficient that, as paper dollars are turned in to the Federal Reserve, they are replaced with coin?

Mr. ALLISON. I really shouldn't answer for the Mint, but my impression would be that it would not be cost-effective for the Mint to acquire sufficient new equipment to produce a large initial inventory of coins, only to revert back to a system in which they only need to produce 5 percent of the initial inventory each year, in the future.

I would say, I would say as a layman—not speaking for the Mint, but as an observer of this process—I would think it would be more efficient to spread that out over a few years, such that they would have a smaller investment up front in minting equipment.

Mr. McCANDLESS. The reports I read about the Mint's proposals on this suggested the same thing, that they would stretch it out over a longer period.

Mr. KOLBE. Mr. Chairman, I don't want to take your time.

Chairman KILDEE. Go ahead.

Mr. KOLBE. The other alternative would be to delay production while you build up, and then to do it over an 18-month period.

Mr. ALLISON. Certainly, certainly.

Chairman KILDEE. A couple of bankers or a few bankers I have talked with have raised this question. The Federal Reserve does not charge banks for counting \$1 bills, but it does charge banks for counting coins. Some have expressed some concern that a \$1 coin will increase their costs because they do charge for counting coins. Have you thought about that and how that might be handled?

Mr. ALLISON. Yes, Mr. Chairman. I might clarify that, if I may.

The Federal Reserve accepts coin deposits and note deposits free of charge from depositing institutions. I think the cost that banks refer to is the cost of having coins wrapped. We—the Federal Reserve System has uniform standards for its cash services.

We require institutions to both deposit and withdraw notes and coins in specific quantities. Those quantities are \$1,000, which is a bundle of notes strapped in 10 100-note straps. That is the standard. And for coins, we both receive coin and pay out coin loose, in bags, the dollar amount varying from denomination to denomination, but I think it is \$2,000 in a bag of \$1 coins, \$1,000 in a bag of quarters, for example. That service is provided free.

Now, if a bank's customers want their coin wrapped, then the bank has to pay—the commercial bank has to pay to have the coin wrapped. In four of the Federal Reserve Districts, it can pay the Federal Reserve Bank to wrap that coin, or it can pay a private company to do it; and the armored car companies all provide coin wrapping as a service. And I might add it is a fairly competitive service, and it is there for a fairly competitive price.

I would just observe that that is not the only cost involved to banks. That is, just as the Federal Reserve System finds it a lot cheaper, and certainly the transit companies find it a lot cheaper to process coins than paper, I think commercial banks would have some other savings in processing coins. I grant that, to the extent that their customers need wrapped coin, they would have to pay for the wrapping.

Chairman KILDEE. At this point I will defer to Mr. Pease and come back with some questions after Mr. Kolbe has his.

Mr. PEASE. Thank you very much, Mr. Chairman. I will try to be brief.

I appreciate the testimony of the witnesses. Is there agreement that if there is a \$1 coin that the \$2 bill ought to be continued, or would some of you feel that we ought to eliminate the \$2 bill as well?

Mr. BENFIELD. We feel that the \$2 bill could be a vehicle to help speed the introduction of a dollar coin. We were talking about buying excess capacity for the Mint to meet additional demand for coins. We have the capacity at the Bureau of Engraving and Printing to print \$2 bills. We would have excess capacity if the \$1 and \$2 bills were not printed. Let's use the \$2 bill to help the transition and get us away from the \$1 bill as quickly as possible. We see it as a transition vehicle.

We also think it is symbolically important that we are not forcing the public to carry coin. It is important that they do have a

paper option. So we do think that the \$2 bill actually makes sense. We are open. We do not advocate the \$2 bill, but we think that it is a good transition denomination.

Mr. PEASE. Does anyone disagree with that?

Mr. ALLISON. The Federal Reserve Board has not formally considered this question, but based on previous positions of the Board, I believe the Board would favor a \$2 coin.

Mr. PEASE. A \$2 coin.

Mr. ALLISON. Rather than a \$2 bill. If there were to be a two dollar denomination, if a \$2 denomination is to be used, then I believe the Federal Reserve would prefer it to be a coin.

Mr. PEASE. Okay. Is there any agreement at all on what the design of the coin would be? Would it be the Susan B. Anthony dollar, or would it be something quite different? I suppose Mr. Kolbe, do you have your—

Mr. KOLBE. Mr. Chairman—Mr. Pease, we have tried, in introducing this legislation, to suggest different designs. I think it is advisable not to do that.

Mr. PEASE. Not to use the Susan B. Anthony.

Mr. KOLBE. Not to use any specific design in the legislation. I think that ought to be left up to a design committee.

Mr. PEASE. I think Senator Cranston had a pretty good experience this year trying to redesign coins.

Mr. KOLBE. That is right.

Mr. PEASE. Mr. Schatz, in your comments it sounded quite a bit to me like you were saying that we know what is good for the people, and that the people will like it once we do it to them. Did I misinterpret what you were saying?

Mr. SCHATZ. No. All I said, Mr. Pease, is that the Congress and the executive branch have done things that people would find much worse than accepting a \$1 coin, not necessarily that we should force it on them.

I think some of the things that Mr. Benfield and others have said about making the transition easier, because obviously not everyone would view it as we do sitting on this panel and as the cosponsors of the legislation do; clearly there is going to be some resistance.

People are used to things, they don't like change, and they don't like the Government telling them what to do. But as I said, I think if the benefits are widely disseminated and there have been lots of editorials, lots of articles—we have printed one in our newsletter which goes to 450,000 people around the country—as well as to daily papers.

I think if you get the media to help out with this transition, to convince people it is worthwhile—because as I said, there has been widespread support—the press can play a very big role in this.

Mr. PEASE. Is there any evidence at all of public demand for this change? Have there been any nationwide polls asking people whether they want a \$1 coin or not?

Mr. SCHATZ. Mr. Benfield, as chairman of the Coalition, may know that.

Mr. BENFIELD. I think with a 3-year lead time there is a danger of waiting until the system is totally broken before you start to fix it. At the point that newspaper racks and people—poor people not having access to telephones and parking meters being ripped out—

the public hates using automated teller machines—when we get to that stage and people say something is wrong here, then add 3 or 4 years to fix it. And so we feel that by 1996, this coin is going to be more than welcome.

Mr. SCHATZ. If I could just add to that, Mr. Pease, the surveys are helpful in some cases; in other cases, you need to convince people of the benefits. You are talking about saving money, and I am not sure that there are people around the country that want to see us indeed waste money, and we do consider this a waste of money.

Mr. PEASE. Well, to repeat my question then, have there been any polls which asked the public whether they wanted this or not?

Mr. KOLBE. Mr. Chairman, could I respond?

Mr. PEASE. Yes. I would be happy to yield.

Chairman KILDEE. You are here both as a witness and as a Member. Please.

Mr. KOLBE. Mr. Chairman, yes, again Mr. Benfield can speak more specifically, but let's be blunt about it. The polls do show that the public does not favor the coin dollar. But then I have not found too many things that the public suggests that they do want other than cutting our salaries or foreign aid that they want to do to balance the budget, but they want a balanced budget.

And my point was that I think that leadership—I said this in my opening remarks—that leadership is going to be required, and this is certainly one of the less painful things that we can do where consumers in the end will clearly benefit, and I think it will be acceptable.

Mr. McCANDLESS. There is a point that I made, if you are asking people, do they want to use a coin while everybody else is kind of simultaneously using bills, the answers is going to be directly no. And the question is about converting from a bill standard over to a coin standard. That is a lot—I mean, that is a hard jump to make.

I suggested the difficulties with respect to the hockey league in making a similar kind of jump. Once the jump was made, everybody was better off. And the hockey players knew they were better off; but they wouldn't make the jump beforehand, and they would have voted against it if they were asked to wear a helmet beforehand. So that logic is exactly consistent with what is going on in this problem.

Mr. PEASE. Well, Mr. Chairman, I just mention that true liberals like myself are always leery of having the government substitute its wisdom for the wisdom of the people and forcing things upon the people that they don't ask for. Popularly, some people who say they are conservatives have said the same thing, but in this case, at least, they appear to be willing to act differently, with no offense intended.

Finally, I would just like to say, Mr. Chairman, I think it is again Mr. Schatz who talked about phasing in this idea—was that you, Mr. Benfield?

Mr. BENFIELD. Yes.

Mr. PEASE. It seems to me that we might try to time this so that we resurrect a \$3 bill in 1996, about the time that the balanced budget amendment will take effect, and in my view, they would be equally phony.

Thank you, Mr. Chairman.

Chairman KILDEE. I don't think I will respond to that comment. Mr. Kolbe?

Mr. KOLBE. Thank you, Mr. Chairman. I would just say in response to Mr. Pease's comments, I am very conscious of public opinion and the importance of having public opinion on our side in this.

As I suggested in my opening remarks, this is one of those issues where I think the Susan B. Anthony failed in large measure because we didn't do the work of developing public opinion. There is a much broader coalition that existed before on this, and I think public opinion can be brought along.

We are accused in this Congress of not leading. We are accused of not having innovative and creative ideas to save money. This is one that clearly does, and I think all the testimony has shown that, in the long run, the public will be better off and happier for it, but there is an initial resistance. I would just suggest that I think some leadership on the part of Congress in this area is going to be less painful here; there will be some other areas that we may have to make some decisions about how we are going to achieve a balanced budget.

I have heard a lot of this testimony before, but I think today's testimony was extraordinarily precise and on target; and I am very appreciative, particularly since I haven't had an opportunity to hear Mr. Allison before, his comments. I have just one or two very quick questions.

Mr. Allison, did you consider that as a one-time item in your savings?

Mr. ALLISON. No, I didn't.

Mr. KOLBE. Do you think that could be a significant factor?

Mr. ALLISON. I wouldn't have any way of estimating; except perhaps by looking to some of the foreign experience, I wouldn't have any way of estimating what that might be.

Without question, there would be some increase in collecting \$1 notes if the \$1 note were going to be withdrawn from circulation. That has happened in practically every other coin-and-note change that I am aware of.

Mr. KOLBE. Something tells me that it might be fairly substantial. If I knew the paper dollar was going to be phased out in 18 months, I would want to rush out and get a few fresh ones and just save them.

Mr. ALLISON. That might very well happen, and I did not take account of that.

Mr. KOLBE. I think the comment about the \$2 bill we got by surprise, but I think we feel we have got to get the \$1 coin before we are ready to be there to talk about the \$2 coin.

One other question, and on the opposition from the American Banking Association, from ABA on this. Is it strictly related to the wrapping costs of coin, or is there—do banks charge a fee for processing paper? Do they get paid for processing paper that they would see as a loss?

Mr. ALLISON. I am not aware that commercial banks charge their customers explicitly for processing deposits. It may be included in a bundled price for an array of services that a bank provides a cus-

tomer, including, obviously, a checking account, a line of credit, and so on; so there would be—there is, no doubt, some charge built in for processing deposits. I would just argue there are bound to be offsets for a commercial bank, as well as for a Federal Reserve Bank, in handling coin.

Mr. KOLBE. It would seem to me there would be. That is why I am puzzling at the opposition which continues to persist, and maybe some other members of the panel might have some thoughts about that.

Mr. McCANDLESS. Some of the resistance I have heard about deals with the transport costs of using—

Mr. KOLBE. Using armored cars?

Mr. McCANDLESS. Right, because the cars are much heavier to transport. And as I mentioned in my prepared statement, there is a trade-off on that in the reduced amount of quarters that they would have to transport. I am not sure where that falls out in terms of the actual total transporting costs. But they—at least in what I have read, they haven't recognized that part of the savings that will accrue.

Mr. KOLBE. Gentlemen, it looks like you ought to get the Armored Car Association. I don't see them down here.

Mr. BENFIELD. I am in touch with them.

Mr. KOLBE. Okay. That is all.

Mr. SCHATZ. Mr. Chairman, if I may add one other comment in response to Mr. Pease, when the idea of military base closings came up, there was a great deal of resistance, not just from members, but from certain aspects of the public. It turned out we needed a commission to finally get that going, but it was done, and there was ample evidence that over the long term it was good for most of the communities in which it occurred.

So it strikes me again that there are examples of where Congress has eventually, in this case, done things that people didn't think in some cases would be such a good idea, but did in fact work out to everyone's benefit.

And, again, I reiterate, when you are looking for budgetary savings, when you are looking to balance the budget, everything should be strongly considered on the side of saving money.

Chairman KILDEE. Mr. Benfield?

Mr. BENFIELD. Yes. One more point on that.

In every foreign country where this has been done, it is initially unpopular. Canada, 22 percent favorable rating before introduction; after introduction, it shot up to 52. About 6 months later, it fell back down to 39. A third like it, a third hate it, and a third don't care.

We see no reason to expect that the U.S. experience would be any different. Initially, the public does not like change of any kind. I have done a lot of radio talk shows and where the host spends 15 minutes with me explaining the need for a \$1 coin, people call up and say, wow, I never thought of it that way. When people have the facts, they like it.

I have talked personally to over 50 newspaper editorial boards; where I go one on one with an editorial writer, I have yet to get a negative editorial. When they have the facts they say, oh, I didn't

know that. Why haven't we done it? I just don't have the time to talk to 200 million people one on one. But they will accept it.

Mr. PEASE. Mr. Chairman, I appreciate those comments. It does bother me a little bit, though, when groups presume to come in and tell the people what is good for them. This sounds to me like a case where Citizens Against Government Waste is proposing to do that, and maybe it is what is good for them. But it is contrary to the rhetoric one sometimes hears from people who glibly support cutting out waste, fraud, and abuse in government.

Chairman KILDEE. Let me ask you a question. I have often been puzzled why the 50-cent piece, when I was growing up a very common coin, disappeared from use virtually; and it is my recollection, it coincided with introduction of the Kennedy 50-cent piece. Can you explain why we don't use 50-cent pieces generally in circulation? When I was a child, it was a common coin.

Mr. BENFIELD. There is no pocket economy to it. This [holding a 50-cent piece] is exactly twice as heavy as this [holding a quarter]. So if you are worried about weight, two quarters is exactly the same weight as one 50-cent piece.

Vending machines have difficulty, because there is a huge ratio of sizes that the coin mechanisms would be required to handle. That would be awkward. So the vending industry has shunned the 50-cent piece. Therefore, the only place you can spend the 50-cent piece is with another human being. It is inconvenient.

And then you get into a cash register design problem, a penny, nickel, dime, quarter, spare rolls over here [holding a cash drawer]. There is no place to put it. That is why the \$2 bill doesn't circulate either, no place to put it.

Chairman KILDEE. When I was growing up, the 50-cent piece—the coin operating machines were not as common as they are now, and the 50-cent piece was a very, very common coin; and it is my recollection, they seemed to disappear from circulation at about the same time as the Kennedy dollar.

I know people were saving the Kennedy dollars—half dollars, I should say, but for some reason, one very rarely sees now a 50-cent piece. I am not satisfied with the answer.

Mr. BENFIELD. I think another reason might have been that the Kennedy half dollar came in at the same time that we took silver out of coinage. So right away, with the Franklin half dollars, people said, wow, those are silver, I am going to hang on to those. The Kennedy half dollar was popular as a keepsake, and they just kind of disappeared.

Chairman KILDEE. That is interesting. I notice in your Coin Coalition you have a number associated with the blind. Why would the blind find the coin more acceptable than the \$1 bill?

Mr. BENFIELD. All paper money feels alike. The blind do quite well, and I am careful not to make this a handicapped issue; it is not. Blind people do just fine in the marketplace. However, there is still the fact that a \$1 bill feels like a \$20 bill. So they are a little more dependent on somebody else.

With a \$1 coin, I now have total freedom to make a small purchase in total confidence. Coins feel different; all paper money feels alike.

Chairman KILDEE. I think Congress does sometimes, lead, sometimes reflects. I think that the American people could benefit if we are going to do something like this from some prior education as to the fiscal savings.

The fiscal savings are an argument that is cogent for me. If we can save the amount of dollars that have been suggested here, those are significant dollars, and we are desperately trying to find ways of saving the taxpayers dollars. And the taxpayer has one element where they can be convinced that something is right, is if it will save dollars. I think that any of you in your capacity can get that message across to the American people, that is probably the best way to get the message across to the Congress of the United States.

I live not too far from Canada. I am one of the few, when I go to Canada, I drive south, and I have found that transformation of attitude in Windsor, right across from Detroit, that the acceptance of the coin now is relatively high, whereas initially it was not looked upon with much fondness. So I think that has been the case. After the fact, they begin to see some conveniences there where they do find acceptance.

But I think prior to the fact, to the degree that the American people, the taxpayer, can be convinced that this can be part of a fiscal package, a savings of their dollars, really, that that could be helpful to the Congress. So all of you could play a role in doing that.

I think this has been a great hearing this morning. I really appreciate the fact that you responded to the questions in your testimony that I put in my letter, so that it made our necessity for asking a lot of questions less needed this morning.

I would like to leave the record open for any further written comments. Either from the members here or others who wish to submit comments, we will leave the record open for, without objection, for 10 additional days for any further comments. Mr. Kolbe, would you care to make any closing remarks?

Mr. KOLBE. Mr. Chairman, just to say thank you very much for holding this hearing. I think it has been helpful; I think the testimony has been good. I think this is part of the process that you described, of helping to educate Members of Congress, as well as the public at large, through the use of the media, as the medium to reach people.

I am very appreciative of the fact that you held this hearing. Thank you.

Chairman KILDEE. That is why I felt it was a proper subject of study by the Budget Committee, because the Budget Committee, above all, has responsibility to try to set priorities, reduce costs. There are other committees in the Congress who have that legislative responsibility, but this is a budgetary matter, too, so we felt that the Budget Committee should get involved in this.

And I appreciate your persistence really in asking us to have a hearing on this, Mr. Kolbe, and I appreciate very much your testimony and, as I say, the response to the questions that I addressed to you in writing, which are included in your testimony.

If there is no other comments, we will stand adjourned.

[Whereupon, at 11:30 a.m., the task force was adjourned, subject to the call of the Chair.]

[Additional material submitted for the record follows.]



CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Robert D. Reischauer
Director
June 10, 1992

Honorable Dale E. Kildee
Chairman
Task Force on Economic Policy,
Projections and Revenues
Committee on the Budget
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

As you requested, the Congressional Budget Office has updated and extended its estimate of H.R. 1245, the One Dollar Coin Act of 1991, as introduced on March 5, 1991. We estimate that enactment of this bill and the necessary appropriations would result in a reduction in the deficit of about \$470 million over the 1993-1997 period and an additional \$580 million in the following two fiscal years. In the absence of appropriations action, enactment of H.R. 1245 would not affect direct spending or receipts, so there would be no pay-as-you-go scoring under the Budget Enforcement Act of 1990.

On November 5, 1991, CBO provided the attached cost estimate for H.R. 1245 to the Subcommittee on Consumer Affairs and Coinage of the House Committee on Banking, Finance and Urban Affairs covering the fiscal years 1992-1996. We have now updated the estimate for new economic assumptions and extended the period of analysis through 1999. For fiscal years 1995 and 1996, the primary difference between the two estimates stems from new assumptions of lower interest rates, which reduce the interest savings that would result from the additional seigniorage on the one dollar coins. For fiscal years 1997-1999, interest savings from seigniorage would continue to grow, while the Federal Reserve's payments to the Treasury would decline, reflecting a reduction in the Federal Reserve's interest earnings as one dollar notes go out of circulation. The attached table summarizes the effects of H.R. 1245 that would have a net budgetary impact.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is James Hearn, who can be reached at 226-2860.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Reischauer'.

Robert D. Reischauer

Attachments

cc: Honorable Amo Houghton
Ranking Minority Member

Honorable Leon E. Panetta
Chairman
Committee on the Budget

Honorable Bill Gradison
Ranking Minority Member
Committee on the Budget

Honorable Henry B. Gonzalez
Chairman
Committee on Banking, Finance
and Urban Affairs

Honorable Chalmers P. Wylie
Ranking Minority Member
Committee on Banking, Finance
and Urban Affairs

Honorable Esteban Edward Torres
Chairman
Subcommittee on Consumer Affairs
and Coinage
Committee on Banking, Finance
and Urban Affairs

Honorable Alfred A. (Al) McCandless
Ranking Minority Member
Subcommittee on Consumer Affairs
and Coinage
Committee on Banking, Finance
and Urban Affairs

**ESTIMATED BUDGETARY IMPACT OF H.R. 1245 -- THE ONE DOLLAR COIN
ACT OF 1991**

(by fiscal year, in millions of dollars)

	1993	1994	1995	1996	1997	1998	1999
SPENDING EFFECTS							
Interest Savings from Seigniorage							
Estimated Authorization Level	--	--	-56	-175	-315	-429	-521
Estimated Outlays	--	--	-56	-175	-315	-429	-521
REVENUE EFFECTS							
Change in Federal Reserve System Payment of Earnings to Treasury ^a	--	--	12	37	124	177	193
Net Budgetary Impact -- Increase or Decrease(-) in the Deficit	--	--	-68	-212	-190	-252	-328

a. Would occur only if funds are appropriated for Mint costs. Positive revenue numbers indicate a decrease in the deficit.



CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Robert D. Reischauer
Director

November 5, 1991

Honorable Esteban Edward Torres
Chairman
Subcommittee on Consumer
Affairs and Coinage
Committee on Banking, Finance
and Urban Affairs
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

As you requested, the Congressional Budget Office has reviewed H.R. 1245, the United States One Dollar Coin Act of 1991, as introduced on March 5, 1991.

In the absence of appropriation action, enactment of H.R. 1245 would not affect direct spending or receipts. Therefore, pay-as-you-go procedures would not apply to the bill.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

Robert D. Reischauer

cc: Honorable Alfred A. (Al) McCandless
Ranking Minority Member

Honorable Henry B. Gonzalez
Chairman
Committee on Banking, Finance
and Urban Affairs

Honorable Chalmers P. Wylie
Ranking Minority Member
Committee on Banking, Finance
and Urban Affairs

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CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

November 5, 1991

1. **BILL NUMBER:** H.R. 1245
2. **BILL TITLE:** The United States One Dollar Coin Act of 1991
3. **BILL STATUS:** As introduced on March 5, 1991.
4. **BILL PURPOSE:**

H.R. 1245 would authorize the Mint to issue a one dollar clad coin that is gold in color, has an unreeded edge, and has an obverse side recognizing America's veterans. Under current law, the Mint is authorized to produce a \$1 coin, but it has not done so since it issued the Susan B. Anthony coin in 1979.

Further, the bill would prohibit the Federal Reserve System from ordering and placing into circulation \$1 notes six months after the Mint issues the \$1 coin. At the same time, the Federal Reserve would begin retiring any \$1 notes that it collects.

5. **ESTIMATED COST TO THE FEDERAL GOVERNMENT:**

(by fiscal year, in millions of dollars)

	1992	1993	1994	1995	1996
SPENDING EFFECTS--AUTHORIZATIONS					
<u>Mint Costs</u>					
Estimated Authorization Level	2	8	5	5	5
Estimated Outlays	2	8	5	5	5
<u>Recovery of Mint Costs--</u>					
<u>Offsetting Receipts</u>					
Estimated Authorization Level	-2	-8	-5	-5	-5
Estimated Outlays	-2	-8	-5	-5	-5
<u>Interest Savings</u>					
<u>from Seigniorage</u>					
Estimated Authorization Level	--	--	--	-57	-187
Estimated Outlays	--	--	--	-57	-187

.....
(Continued)

Continued

(by fiscal year, in millions of dollars)

	1992	1993	1994	1995	1996
REVENUE EFFECTS					
Change in Federal Reserve System Payment of Earnings to Treasury ^a	---	---	---	12	37
Net Budgetary Impact -- Increase or Decrease(-) in the Deficit	---	---	---	-69	-224

- a. Would occur only if funds are appropriated for Mint costs. Positive revenue numbers indicate a decrease in the deficit.

The budgetary impact of this bill falls within functions 800 and 900. Savings would continue to accrue, in increasing amounts, after 1996.

Basis of Estimate:

Under current law, the Mint is authorized to produce a \$1 coin, but it does not because it already has about 400 million Susan B. Anthony \$1 coins in storage and does not anticipate significant increased demand for additional coins. H.R. 1245 would authorize the Mint to produce \$1 coins with new specifications and would create a demand for the coins by prohibiting the Federal Reserve from placing \$1 notes into circulation six months after the first new coins are issued. Without the \$1 note, the public most likely would have to conduct transactions with a \$1 dollar coin or a \$2 note.

Besides affecting the Mint's costs for producing the new coin, H.R. 1245 would have two primary effects on the budget. First, producing new coins increases seigniorage, which is the difference between the face value of the coin (\$1) and the cost of producing the coin (six cents). Seigniorage does not affect the budget directly, but rather is considered a means of financing. When seigniorage increases, the amount the Treasury has to borrow decreases, and the government avoids paying the associated interest costs. The other effect stems from the prohibition on issuance of \$1 Federal Reserve notes. The Federal Reserve's holding of Treasury securities decreases if the amount of currency in circulation decreases, and the Federal Reserve would earn less interest. More than offsetting this impact would be reduced expenses incurred by the Federal Reserve for the printing and handling of the notes.

None of these budgetary effects would occur, however, upon enactment of H.R. 1245. Although the Mint would be authorized to produce new coins, it does not currently have the capacity to produce the number of coins that would be needed to replace the \$1 note, and

it would not have the authority to spend funds to acquire such capacity. Therefore, the Mint would require subsequent appropriations action before it could produce the coins and before the other budget impacts could occur. The following sections detail the individual budget effects and underlying assumptions.

Mint Costs. H.R. 1245 would direct the Mint to place the first new \$1 coin into circulation 18 months after the enactment date. The Mint, however, has stated in testimony before the Congress that it would need at least 30 months to prepare before producing the first coin. CBO adopts this assumption, and therefore we estimate that the Mint would begin production around October 1994 and would issue the first coin about six months later.

We estimate that, before beginning production, the Mint would need an appropriation of about \$2 million in 1992, \$8 million in 1993, and \$5 million in 1994 to acquire the necessary equipment. The Mint would require additional appropriations totaling about \$10 million in 1995 and 1996 to conduct the necessary public information campaign and manufacture the coins. However, by budgetary convention, the amount of the Mint's costs, as reflected in its appropriation, is subtracted each year from the seigniorage on coins and is deposited into an on-budget offsetting receipt account. Thus, any expenses involved with coin production are directly offset in the receipt account, resulting in no net effect on outlays.

Interest Savings from Seigniorage. The seigniorage on each new \$1 coin would be 94 cents, and the total amount of seigniorage created each year would depend on the number of coins minted. The Mint states that it would be able to produce 2 billion \$1 coins annually beginning in fiscal year 1995. How many coins it ultimately would produce would depend on the public's demand for the coins once the \$1 note is no longer readily available.

To conduct some transactions for which \$1 notes would have been used, the public might find it convenient to use \$2 notes. CBO assumes that instead of using the estimated 5.5 billion \$1 notes the Federal Reserve would have placed in circulation in 1996, the public would demand about \$3.5 billion worth of \$2 notes. The remaining \$2 billion could be satisfied by the \$1 coin. It is likely, however, that the public would need even more coins to conduct transactions. Experience of other countries that have recently switched from a low denomination note to a low denomination coin indicates that initially the public demands twice as many coins as notes, apparently to satisfy systems that rely on low value transactions such as transit or vending systems. This implies that for 1996, the public would need 4 billion \$1 coins. Thus, we assume that the Mint will produce at capacity, generating 4 billion \$1 coins by the end of 1996.

The seigniorage on the 2 billion \$1 coins produced in 1995 would be \$1.9 billion. However we expect that the Mint would then choose to melt down about 300 million Susan B. Anthony \$1 coins that it would have in storage (still leaving about 60 million). The Mint would have to count reverse seigniorage (97 cents per coin) amounting to \$0.3 billion. This would produce a net seigniorage effect of \$1.6 billion in 1995, which would decrease the government's borrowing needs by that amount and thus reduce interest costs by \$57 million. Interest savings in 1996 from two years worth of seigniorage would amount to \$187 million. The estimate of interest savings assumes that the Mint produces the coins evenly throughout the year.

Federal Reserve Payment of Earnings to the Treasury. In the process of issuing currency, the Federal Reserve acquires interest-earning Treasury securities in an amount generally equal to the value of the new currency. The Federal Reserve's budget surplus, generated primarily by the interest earnings on its portfolio of Treasury securities, is remitted each year to the Treasury, with the payment recorded in the budget as governmental receipts, or revenue. To the extent that the total value of Federal Reserve notes changes as a result of H.R. 1245, the Federal Reserve's interest earnings on its portfolio of Treasury securities would change, affecting Treasury revenues. The requirement in H.R. 1245 that the Federal Reserve stop issuing \$1 notes, which we assume would occur at the beginning of fiscal year 1996, would decrease the Federal Reserve's interest earnings by an estimated \$12 million in 1996. This revenue effect is contingent on the Mint receiving the required appropriations to produce the new coins.

On the one hand, the Federal Reserve would lose interest earnings because of the decrease in the number of \$1 notes. Without H.R. 1245, the average number of \$1 notes in circulation in 1996 would be about 7.3 billion. With H.R. 1245, however, the Federal Reserve would collect about 3.6 billion notes in 1996 and would not issue any, resulting in an average circulation over the year of about 5.3 billion. This circulation decrease of 2 billion would result in decreased interest earnings of \$120 million in 1996. The 3.6 billion notes the Federal Reserve would collect is less than the Federal Reserve would ordinarily collect. Experience in other countries, notably Canada and Australia, that withdrew their lowest denomination note indicates that the public takes about one-half of those notes out of active circulation for souvenirs when the central bank stops issuing new ones. For this estimate, CBO assumes that the Federal Reserve will be able to collect only two-thirds of the \$1 notes in circulation.

On the other hand, the Federal Reserve's interest earnings would increase by \$108 million in 1996 because it would issue \$3.6 billion worth of \$2 notes over the course of the year to satisfy the public demand for low denomination units of exchange that would remain unmet by the \$1 coins produced by that time. The net effect of these two changes in interest earnings is a \$12 million loss in profit for the Federal Reserve in 1996.

The reduced interest earnings of the Federal Reserve would be more than offset by its reduced expenses for printing and handling currency. The Federal Reserve pays the Bureau of Engraving and Printing (BEP) for printing Federal Reserve notes. In 1995, the BEP workload is expected to be 11.7 billion notes. With enactment of H.R. 1245, the workload would decrease to about 10.8 billion notes, saving the Federal Reserve about \$12 million in printing and handling costs and increasing the payment to the Treasury by the same amount. In 1996, the BEP workload would drop by about 3.7 billion notes, thus saving the Federal Reserve about \$50 million, which, when offset by a the lost interest earnings of \$12 million, would result in an increased payment to the Treasury of \$37 million.

6. PAY-AS-YOU-GO CONSIDERATIONS:

The Budget Enforcement Act of 1990 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts through 1995. CBO estimates that enactment of H.R. 1245, by itself, would not affect direct spending or receipts. Therefore, pay-as-you-go procedures would not apply to the bill.

7. **ESTIMATED COST TO STATE AND LOCAL GOVERNMENTS:** None.

8. **ESTIMATE COMPARISON:**

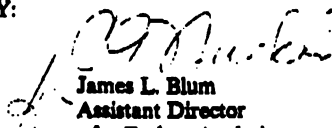
In a May 1990 report, the General Accounting Office stated that the government could realize about \$318 million (in present value dollars) annually if it replaced the dollar note with a dollar coin.

9. **PREVIOUS CBO ESTIMATE:** None.

10. **ESTIMATE PREPARED BY:**

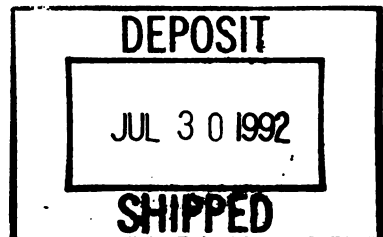
James Hearn (226-2860), Lealie Griffin (226-2880), and Mark Booth (226-2685).

11. **ESTIMATE APPROVED BY:**


James L. Blum
Assistant Director
for Budget Analysis

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